

SCORE Search Results Details for Application 10717243 and Search Result us-10-717-243-101.ra1.

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This page gives you Search Results detail for the Application 10717243 and Search Result us-10-717-243-101.ra1.

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OM protein - protein search, using sw model

Run on: July 20, 2006, 09:37:31 ; Search time 33.8063 Seconds
(without alignments)
649.885 Million cell updates/sec

Title: US-10-717-243-101
Perfect score: 1277
Sequence: 1 GLDTVSFSTKGATYITYVNF.....AVDQVKPKIALLKFDKDPK 251

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 650591 seqs, 87530628 residues

Total number of hits satisfying chosen parameters: 650591

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued Patents_AA:*
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2: /EMC_Celerra_SIDS3/ptodata/2/iaa/6_COMB.pep:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	1277	100.0	251	1	US-08-425-336-101	Sequence 101, App
2	1277	100.0	251	1	US-08-488-113B-101	Sequence 101, App
3	1277	100.0	251	1	US-08-477-484B-101	Sequence 101, App
4	1277	100.0	251	1	US-08-646-360-101	Sequence 101, App
5	1277	100.0	251	2	US-08-839-765-101	Sequence 101, App
6	1277	100.0	251	2	US-09-136-389-101	Sequence 101, App
7	1277	100.0	251	2	US-09-610-838-101	Sequence 101, App
8	1277	100.0	251	2	US-09-711-485-101	Sequence 101, App
9	1273	99.7	251	1	US-08-425-336-99	Sequence 99, Appl
10	1273	99.7	251	1	US-08-425-336-100	Sequence 100, App

11	1273	99.7	251	1	US-08-488-113B-99	Sequence 99, Appl
12	1273	99.7	251	1	US-08-488-113B-100	Sequence 100, App
13	1273	99.7	251	1	US-08-477-484B-99	Sequence 99, Appl
14	1273	99.7	251	1	US-08-477-484B-100	Sequence 100, App
15	1273	99.7	251	1	US-08-646-360-99	Sequence 99, Appl
16	1273	99.7	251	1	US-08-646-360-100	Sequence 100, App
17	1273	99.7	251	2	US-08-839-765-99	Sequence 99, Appl
18	1273	99.7	251	2	US-08-839-765-100	Sequence 100, App
19	1273	99.7	251	2	US-09-136-389-99	Sequence 99, Appl
20	1273	99.7	251	2	US-09-136-389-100	Sequence 100, App
21	1273	99.7	251	2	US-09-610-838-99	Sequence 99, Appl
22	1273	99.7	251	2	US-09-610-838-100	Sequence 100, App
23	1273	99.7	251	2	US-09-711-485-99	Sequence 99, Appl
24	1273	99.7	251	2	US-09-711-485-100	Sequence 100, App
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36	1269	99.4	251	2	US-09-136-389-2	Sequence 2, Appli
37	1269	99.4	251	2	US-09-136-389-110	Sequence 110, App
38	1269	99.4	251	2	US-09-217-352-247	Sequence 247, App
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41	1269	99.4	251	2	US-09-711-485-2	Sequence 2, Appli
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43	1269	99.4	251	2	US-09-645-603B-2	Sequence 2, Appli
44	1266	99.1	251	1	US-07-901-707-2	Sequence 2, Appli
45	1266	99.1	251	1	US-07-988-430-2	Sequence 2, Appli

ALIGNMENTS

RESULT 1

US-08-425-336-101

; Sequence 101, Application US/08425336

; Patent No. 5621083

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; APPLICANT: Carroll, Stephen F.

; APPLICANT: Studnika, Gary M.

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating

; TITLE OF INVENTION: Proteins

; NUMBER OF SEQUENCES: 140

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun

; STREET: 6300 Sears Tower, 233 South Wacker Drive

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60606-6402

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/425,336

; FILING DATE: 18-APR-1995

; CLASSIFICATION: 530

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 08/064,691

; FILING DATE: 12-MAY-1993

; APPLICATION NUMBER: US 07/901,707

; FILING DATE: 19-JUN-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/787,567

; FILING DATE: 04-NOV-1991

; ATTORNEY/AGENT INFORMATION:

```

; NAME: Meyers, Thomas C.
; REGISTRATION NUMBER: P-36,989
; REFERENCE/DOCKET NUMBER: 31394
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 101:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-425-336-101

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Query Match      100.0%; Score 1277; DB 1; Length 251;
Best Local Similarity 100.0%; Pred. No. 1.1e-118;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
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Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
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Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
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Qy    241 ALLKFVDKDPK 251
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Db    241 ALLKFVDKDPK 251

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RESULT 2

US-08-488-113B-101

; Sequence 101, Application US/08488113B

; Patent No. 5744580

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; APPLICANT: Carroll, Stephen F.

; APPLICANT: Studnika, Gary M.

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating

; TITLE OF INVENTION: Proteins

; NUMBER OF SEQUENCES: 169

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: McAndrews, Held & Malloy, Ltd.

; STREET: 500 West Madison Street, 34th floor

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60661

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/488,113B

; FILING DATE: 07-JUN-1995

; CLASSIFICATION: 530

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/425,336

; FILING DATE: 18-APR-1995

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/064,691

; FILING DATE: 12-MAY-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/988,430

; FILING DATE: 09-DEC-1992

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; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 11022US07/200-70.P3.C2A
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 101:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-488-113B-101

Query Match 100.0%; Score 1277; DB 1; Length 251;
Best Local Similarity 100.0%; Pred. No. 1.1e-118;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy    241 ALLKFVDKDPK 251
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Db    241 ALLKFVDKDPK 251

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RESULT 3
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; Sequence 101, Application US/08477484B
; Patent No. 5756699
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 169
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/477,484B
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/425,336

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; FILING DATE: 18-APR-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 11022US07/200-70.P3.C2A
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 101:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-477-484B-101

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Query Match      100.0%; Score 1277; DB 1; Length 251;
Best Local Similarity 100.0%; Pred. No. 1.1e-118;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
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Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
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Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
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Qy    241 ALLKFVDKDPK 251
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Db    241 ALLKFVDKDPK 251

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RESULT 4
US-08-646-360-101
; Sequence 101, Application US/08646360
; Patent No. 5837491
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 173
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS

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; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/646,360
; FILING DATE: 13-MAY-1996
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/US94/05348
; FILING DATE: 12-MAY-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 200-70.P4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 101:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-646-360-101

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Query Match          100.0%; Score 1277; DB 1; Length 251;
Best Local Similarity 100.0%; Pred. No. 1.1e-118;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
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Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSYGANGMFSEAVELERANGKYYVTAVDQVKPKI 240
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Db    181 FQQRIRPANNTISLENKWGKLSFQIRTSYGANGMFSEAVELERANGKYYVTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
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Db    241 ALLKFVDKDPK 251

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RESULT 5
US-08-839-765-101
; Sequence 101, Application US/08839765
; Patent No. 6146631
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 169
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago

```

```

; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/839,765
; FILING DATE: 15-APR-1997
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/425,336
; FILING DATE: 18-APR-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 11022US09/200-70.P3.C3
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 101:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-839-765-101

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Query Match          100.0%; Score 1277; DB 2; Length 251;
Best Local Similarity 100.0%; Pred. No. 1.1e-118;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
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Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
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Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSYGANGMFSEAVELERANGKYYVTAVDQVKPKI 240
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Qy    241 ALLKFVDKDPK 251
        ||||||||
Db    241 ALLKFVDKDPK 251

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RESULT 6
US-09-136-389-101
; Sequence 101, Application US/09136389
; Patent No. 6146850
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Studnika, Gary M.

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; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 173
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/136,389
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/646,360
; FILING DATE: 13-MAY-1996
; APPLICATION NUMBER: PCT/US94/05348
; FILING DATE: 12-MAY-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 200-70.P4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 101:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-136-389-101

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Query Match          100.0%; Score 1277; DB 2; Length 251;
Best Local Similarity 100.0%; Pred. No. 1.1e-118;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 GLDTVSFSTKGATYITYVNFNLNLRVCLKPEGNSHGIPLLRKKADDPGKA FVLVALSNDN 60
|
Db      1 GLDTVSFSTKGATYITYVNFNLNLRVCLKPEGNSHGIPLLRKKADDPGKA FVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
|
Db     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAA RFTFIENQIRNN 180
|
Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAA RFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTS GANGMFSEAVELERANGKYYVTAVDQVKPKI 240
|
Db    181 FQQRIRPANNTISLENKWGKLSFQIRTS GANGMFSEAVELERANGKYYVTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
|
Db    241 ALLKFVDKDPK 251

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RESULT 7
 US-09-610-838-101
 ; Sequence 101, Application US/09610838
 ; Patent No. 6376217
 ; GENERAL INFORMATION:
 ; APPLICANT: Better, Marc D.
 ; APPLICANT: Carroll, Stephen F.
 ; APPLICANT: Studnika, Gary M.
 ; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
 ; TITLE OF INVENTION: Proteins
 ; NUMBER OF SEQUENCES: 173
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
 ; STREET: 500 West Madison Street, 34th floor
 ; CITY: Chicago
 ; STATE: Illinois
 ; COUNTRY: USA
 ; ZIP: 60661
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: PatentIn Release #1.0, Version #1.25
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/09/610,838
 ; FILING DATE: 06-JUL-2000
 ; CLASSIFICATION:
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US/09/136,389
 ; FILING DATE: 18-AUG-1998
 ; APPLICATION NUMBER: 08/646,360
 ; FILING DATE: 13-MAY-1996
 ; APPLICATION NUMBER: PCT/US94/05348
 ; FILING DATE: 12-MAY-1994
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/064,691
 ; FILING DATE: 12-MAY-1993
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 07/988,430
 ; FILING DATE: 09-DEC-1992
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 07/901,707
 ; FILING DATE: 19-JUN-1992
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 07/787,567
 ; FILING DATE: 04-NOV-1991
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: McNicholas, Janet M.
 ; REGISTRATION NUMBER: 32,918
 ; REFERENCE/DOCKET NUMBER: 200-70.P4
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: 312/707-8889
 ; TELEFAX: 312/707-9155
 ; TELEX: 650 388-1248
 ; INFORMATION FOR SEQ ID NO: 101:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 251 amino acids
 ; TYPE: amino acid
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: protein
 US-09-610-838-101

Query Match 100.0%; Score 1277; DB 2; Length 251;
 Best Local Similarity 100.0%; Pred. No. 1.1e-118;
 Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GLDTSVSFSTKGATYITYVNFNLRLVKLKPEGNSHGIPLLRKKADDPGKAFVLVALSNDN 60
 Db 1 GLDTSVSFSTKGATYITYVNFNLRLVKLKPEGNSHGIPLLRKKADDPGKAFVLVALSNDN 60
 Qy 61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
 Db 61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
 Qy 121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180

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Db      121 |||||AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIASSLLVVIQMVSEARFTFIENQIRNN 180
Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
Db      181 |||||FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
Qy      241 ALLKFVDKDPK 251
Db      241 |||||ALLKFVDKDPK 251

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RESULT 8

US-09-711-485-101

; Sequence 101, Application US/09711485

; Patent No. 6649742

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; APPLICANT: Carroll, Stephen F.

; APPLICANT: Studnika, Gary M.

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating

; TITLE OF INVENTION: Proteins

; NUMBER OF SEQUENCES: 169

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: McAndrews, Held & Malloy, Ltd.

; STREET: 500 West Madison Street, 34th floor

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60661

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/711,485

; FILING DATE:

; CLASSIFICATION:

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 08/839,765

; FILING DATE:

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/064,691

; FILING DATE: 12-MAY-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/988,430

; FILING DATE: 09-DEC-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/901,707

; FILING DATE: 19-JUN-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/787,567

; FILING DATE: 04-NOV-1991

; ATTORNEY/AGENT INFORMATION:

; NAME: McNicholas, Janet M.

; REGISTRATION NUMBER: 32,918

; REFERENCE/DOCKET NUMBER: 11022US09/200-70.P3.C3

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 312/707-8889

; TELEFAX: 312/707-9155

; TELEX: 650 388-1248

; INFORMATION FOR SEQ ID NO: 101:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 251 amino acids

; TYPE: amino acid

; TOPOLOGY: linear

; MOLECULE TYPE: protein

US-09-711-485-101

Query Match 100.0%; Score 1277; DB 2; Length 251;

Best Local Similarity 100.0%; Pred. No. 1.1e-118;

Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 GLDTSVFSFGKATYITYVNFNLRLVKLKEGNSHGIPLLRKKADDPGKAFVLVALSNDN 60
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```

Db          1 GLDTVSFSTKGATYITYVNFNLNLRVCLKPEGNSHGIPLLRKKADDPGKAFVLVALSNDN 60
Qy          61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
          |||
Db          61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
Qy          121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIASSLLVVIQMVSEARFTFIENQIRNN 180
          |||
Db          121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIASSLLVVIQMVSEARFTFIENQIRNN 180
Qy          181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
          |||
Db          181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
Qy          241 ALLKFVDKDPK 251
          |||
Db          241 ALLKFVDKDPK 251

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RESULT 9

US-08-425-336-99

; Sequence 99, Application US/08425336

; Patent No. 5621083

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; APPLICANT: Carroll, Stephen F.

; APPLICANT: Studnika, Gary M.

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating

; TITLE OF INVENTION: Proteins

; NUMBER OF SEQUENCES: 140

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun

; STREET: 6300 Sears Tower, 233 South Wacker Drive

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60606-6402

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/425,336

; FILING DATE: 18-APR-1995

; CLASSIFICATION: 530

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 08/064,691

; FILING DATE: 12-MAY-1993

; APPLICATION NUMBER: US 07/901,707

; FILING DATE: 19-JUN-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/787,567

; FILING DATE: 04-NOV-1991

; ATTORNEY/AGENT INFORMATION:

; NAME: Meyers, Thomas C.

; REGISTRATION NUMBER: P-36,989

; REFERENCE/DOCKET NUMBER: 31394

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 312/474-6300

; TELEFAX: 312/474-0448

; TELEX: 25-3856

; INFORMATION FOR SEQ ID NO: 99:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 251 amino acids

; TYPE: amino acid

; TOPOLOGY: linear

; MOLECULE TYPE: protein

US-08-425-336-99

Query Match 99.7%; Score 1273; DB 1; Length 251;

Best Local Similarity 99.6%; Pred. No. 2.7e-118;

Matches 250; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy          1 GLDTVSFSTKGATYITYVNFNLNLRVCLKPEGNSHGIPLLRKKADDPGKAFVLVALSNDN 60
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Db          1 GLDTSVFSSTKGATYITYVNFNLRLRVKLKPEGNSHGIPLLRKKCDPGKAFVLVALSNDN 60
Qy          61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFSGSYPSLEGEK 120
            |||
Db          61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFSGSYPSLEGEK 120
Qy          121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIASSLLVVIQMVSEAAARFTFIENQIRNN 180
            |||
Db          121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIASSLLVVIQMVSEAAARFTFIENQIRNN 180
Qy          181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
            |||
Db          181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
Qy          241 ALLKFVDKDPK 251
            |||
Db          241 ALLKFVDKDPK 251

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RESULT 10

US-08-425-336-100

; Sequence 100, Application US/08425336

; Patent No. 5621083

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; APPLICANT: Carroll, Stephen F.

; APPLICANT: Studnika, Gary M.

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating

; TITLE OF INVENTION: Proteins

; NUMBER OF SEQUENCES: 140

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun

; STREET: 6300 Sears Tower, 233 South Wacker Drive

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60606-6402

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/425,336

; FILING DATE: 18-APR-1995

; CLASSIFICATION: 530

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 08/064,691

; FILING DATE: 12-MAY-1993

; APPLICATION NUMBER: US 07/901,707

; FILING DATE: 19-JUN-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/787,567

; FILING DATE: 04-NOV-1991

; ATTORNEY/AGENT INFORMATION:

; NAME: Meyers, Thomas C.

; REGISTRATION NUMBER: P-36,989

; REFERENCE/DOCKET NUMBER: 31394

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 312/474-6300

; TELEFAX: 312/474-0448

; TELEX: 25-3856

; INFORMATION FOR SEQ ID NO: 100:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 251 amino acids

; TYPE: amino acid

; TOPOLOGY: linear

; MOLECULE TYPE: protein

US-08-425-336-100

Query Match 99.7%; Score 1273; DB 1; Length 251;

Best Local Similarity 99.6%; Pred. No. 2.7e-118;

Matches 250; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy          1 GLDTSVFSSTKGATYITYVNFNLRLRVKLKPEGNSHGIPLLRKKADDPGKAFVLVALSNDN 60
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Db          1 GLDTVSFSTKGATYITYVNFNLNLRVKKLKEGNSHGIPLLRKKADDPGKCFVLVALSNDN 60
Qy          61 GQLAEIAIDVTSVYVVGYYQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
            |||
Db          61 GQLAEIAIDVTSVYVVGYYQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
Qy          121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
            |||
Db          121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
Qy          181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
            |||
Db          181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
Qy          241 ALLKFVDKDPK 251
            |||
Db          241 ALLKFVDKDPK 251

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RESULT 11

US-08-488-113B-99

; Sequence 99, Application US/08488113B

; Patent No. 5744580

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; APPLICANT: Carroll, Stephen F.

; APPLICANT: Studnika, Gary M.

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating

; TITLE OF INVENTION: Proteins

; NUMBER OF SEQUENCES: 169

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: McAndrews, Held & Malloy, Ltd.

; STREET: 500 West Madison Street, 34th floor

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60661

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/488,113B

; FILING DATE: 07-JUN-1995

; CLASSIFICATION: 530

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/425,336

; FILING DATE: 18-APR-1995

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/064,691

; FILING DATE: 12-MAY-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/988,430

; FILING DATE: 09-DEC-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/901,707

; FILING DATE: 19-JUN-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/787,567

; FILING DATE: 04-NOV-1991

; ATTORNEY/AGENT INFORMATION:

; NAME: McNicholas, Janet M.

; REGISTRATION NUMBER: 32,918

; REFERENCE/DOCKET NUMBER: 11022US07/200-70.P3.C2A

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 312/707-8889

; TELEFAX: 312/707-9155

; TELEX: 650 388-1248

; INFORMATION FOR SEQ ID NO: 99:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 251 amino acids

; TYPE: amino acid

; TOPOLOGY: linear

; MOLECULE TYPE: protein

US-08-488-113B-99

Query Match 99.7%; Score 1273; DB 1; Length 251;
Best Local Similarity 99.6%; Pred. No. 2.7e-118;
Matches 250; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy      1 GLDTSVFSTKGATYITYVNFNLNLRVCLKPEGNSHGIPLLRKKADDPGKAFVLVALSNDN 60
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 GLDTSVFSTKGATYITYVNFNLNLRVCLKPEGNSHGIPLLRKKCDDPGKAFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
        ||||||||
Db    241 ALLKFVDKDPK 251
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RESULT 12

US-08-488-113B-100

; Sequence 100, Application US/08488113B

; Patent No. 5744580

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; APPLICANT: Carroll, Stephen F.

; APPLICANT: Studnika, Gary M.

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating

; TITLE OF INVENTION: Proteins

; NUMBER OF SEQUENCES: 169

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: McAndrews, Held & Malloy, Ltd.

; STREET: 500 West Madison Street, 34th floor

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60661

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/488,113B

; FILING DATE: 07-JUN-1995

; CLASSIFICATION: 530

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/425,336

; FILING DATE: 18-APR-1995

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/064,691

; FILING DATE: 12-MAY-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/988,430

; FILING DATE: 09-DEC-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/901,707

; FILING DATE: 19-JUN-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/787,567

; FILING DATE: 04-NOV-1991

; ATTORNEY/AGENT INFORMATION:

; NAME: McNicholas, Janet M.

; REGISTRATION NUMBER: 32,918

; REFERENCE/DOCKET NUMBER: 11022US07/200-70.P3.C2A

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 312/707-8889

; TELEFAX: 312/707-9155

; TELEX: 650 388-1248

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; INFORMATION FOR SEQ ID NO: 100:
; SEQUENCE CHARACTERISTICS:
;   LENGTH: 251 amino acids
;   TYPE: amino acid
;   TOPOLOGY: linear
;   MOLECULE TYPE: protein
US-08-488-113B-100
```

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Query Match      99.7%; Score 1273; DB 1; Length 251;
Best Local Similarity 99.6%; Pred. No. 2.7e-118;
Matches 250; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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Qy      1 GLDTSVSFSTKGATYITYVNFNLNLRVKLKPEGNSHGIPLLRKKADDPGKAFVLVALSNDN 60
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 GLDTSVSFSTKGATYITYVNFNLNLRVKLKPEGNSHGIPLLRKKADDPGKCFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
        |||||||||
Db    241 ALLKFVDKDPK 251
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RESULT 13

US-08-477-484B-99

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; Sequence 99, Application US/08477484B
; Patent No. 5756699
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GENERAL INFORMATION:

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; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 169
; CORRESPONDENCE ADDRESS:
;   ADDRESSEE: McAndrews, Held & Malloy, Ltd.
;   STREET: 500 West Madison Street, 34th floor
;   CITY: Chicago
;   STATE: Illinois
;   COUNTRY: USA
;   ZIP: 60661
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COMPUTER READABLE FORM:

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; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
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CURRENT APPLICATION DATA:

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; APPLICATION NUMBER: US/08/477,484B
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 530
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PRIOR APPLICATION DATA:

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; APPLICATION NUMBER: US 08/425,336
; FILING DATE: 18-APR-1995
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PRIOR APPLICATION DATA:

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; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
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PRIOR APPLICATION DATA:

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; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
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PRIOR APPLICATION DATA:

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; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
```

PRIOR APPLICATION DATA:

```
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
```

ATTORNEY/AGENT INFORMATION:

```

; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 11022US07/200-70.P3.C2A
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 99:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-477-484B-99

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Query Match          99.7%; Score 1273; DB 1; Length 251;
Best Local Similarity 99.6%; Pred. No. 2.7e-118;
Matches 250; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Db      1 GLDTSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLKKCDDPGKAFVLVALSNDN 60

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Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
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Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYTAVDQVKPKI 240
        ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
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Db    241 ALLKFVDKDPK 251

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RESULT 14

US-08-477-484B-100

; Sequence 100, Application US/08477484B

; Patent No. 5756699

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; APPLICANT: Carroll, Stephen F.

; APPLICANT: Studnika, Gary M.

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating

; TITLE OF INVENTION: Proteins

; NUMBER OF SEQUENCES: 169

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: McAndrews, Held & Malloy, Ltd.

; STREET: 500 West Madison Street, 34th floor

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60661

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/477,484B

; FILING DATE: 07-JUN-1995

; CLASSIFICATION: 530

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/425,336

; FILING DATE: 18-APR-1995

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/064,691

; FILING DATE: 12-MAY-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/988,430

; FILING DATE: 09-DEC-1992

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; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 11022US07/200-70.P3.C2A
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 100:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-477-484B-100

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Query Match          99.7%; Score 1273; DB 1; Length 251;
Best Local Similarity 99.6%; Pred. No. 2.7e-118;
Matches 250; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy      1 GLDTSVSFSTKGATYITYVNFNLNLRVCLKPEGNSHGIPLLRKKADDPGKAFVLVALSNDN 60
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Db      1 GLDTSVSFSTKGATYITYVNFNLNLRVCLKPEGNSHGIPLLRKKADDPGKCFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
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Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
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Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSANGMFSEAVELERANGKKYVTVAVDQVKPKI 240
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Db    181 FQQRIRPANNTISLENKWGKLSFQIRTSANGMFSEAVELERANGKKYVTVAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
        |||||||||
Db    241 ALLKFVDKDPK 251

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RESULT 15
US-08-646-360-99
; Sequence 99, Application US/08646360
; Patent No. 5837491
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 173
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/646,360
; FILING DATE: 13-MAY-1996
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/US94/05348

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; FILING DATE: 12-MAY-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 200-70.P4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 99:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-646-360-99

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Query Match          99.7%; Score 1273; DB 1; Length 251;
Best Local Similarity 99.6%; Pred. No. 2.7e-118;
Matches 250; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy      1 GLDTSVSFSTKGATYITYVNFNLRLVRLKPEGNSHGIPLLRKKADDPGKAFVLVALSNDN 60
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Db      1 GLDTSVSFSTKGATYITYVNFNLRLVRLKPEGNSHGIPLLRKKCDDPGKAFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
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Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTS GANGMFSEAVELERANGKYYVTAVDQVKPKI 240
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Db    181 FQQRIRPANNTISLENKWGKLSFQIRTS GANGMFSEAVELERANGKYYVTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
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Db    241 ALLKFVDKDPK 251

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Search completed: July 20, 2006, 09:38:57
Job time : 34.8063 secs

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SCORE 1.3 BuildDate: 12/06/2005

SCORE Search Results Details for Application 10717243 and Search Result us-10-717-243-101.rapbm.

[Score Home Page](#)
[Retrieve Application List](#)
[SCORE System Overview](#)
[SCORE FAQ](#)
[Comments / Suggestions](#)

This page gives you Search Results detail for the Application 10717243 and Search Result us-10-717-243-101.rapbm.

[start](#)

[Go Back to previous page](#)

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OM protein - protein search, using sw model

Run on: July 20, 2006, 09:40:12 ; Search time 81.5055 Seconds
(without alignments)
1426.491 Million cell updates/sec

Title: US-10-717-243-101
Perfect score: 1277
Sequence: 1 GLDTVSFSTKGATYITYVNF.....AVDQVKPKIALLKFDKDPK 251

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2097797 seqs, 463214858 residues

Total number of hits satisfying chosen parameters: 2097797

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_AA_Main:*
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2: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB ID	Description
1	1277	100.0	251	4	US-10-127-890-101
2	1277	100.0	251	5	US-10-717-243-101
3	1273	99.7	251	4	US-10-127-890-99
4	1273	99.7	251	4	US-10-127-890-100
5	1273	99.7	251	5	US-10-717-243-99
6	1273	99.7	251	5	US-10-717-243-100
7	1269	99.4	251	3	US-09-765-527-247
8	1269	99.4	251	4	US-10-127-890-2
9	1269	99.4	251	4	US-10-127-890-110
10	1269	99.4	251	5	US-10-717-243-2
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12	1269	99.4	316	4	US-10-074-596-1	Sequence 1, Appli
13	1269	99.4	498	5	US-10-964-195-13	Sequence 13, Appl
14	1269	99.4	507	4	US-10-074-596-11	Sequence 11, Appl
15	1266	99.1	293	3	US-09-765-527-259	Sequence 259, App
16	1266	99.1	309	3	US-09-765-527-253	Sequence 253, App
17	1266	99.1	332	3	US-09-765-527-251	Sequence 251, App
18	1265	99.1	751	6	US-11-084-080-26	Sequence 26, Appl
19	1264	99.0	251	4	US-10-127-890-108	Sequence 108, App
20	1264	99.0	251	5	US-10-717-243-108	Sequence 108, App
21	1261	98.7	251	4	US-10-127-890-103	Sequence 103, App
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29	1261	98.7	251	5	US-10-717-243-106	Sequence 106, App
30	1261	98.7	251	5	US-10-717-243-109	Sequence 109, App
31	1260	98.7	251	4	US-10-127-890-102	Sequence 102, App
32	1260	98.7	251	4	US-10-127-890-107	Sequence 107, App
33	1260	98.7	251	4	US-10-127-890-111	Sequence 111, App
34	1260	98.7	251	5	US-10-717-243-102	Sequence 102, App
35	1260	98.7	251	5	US-10-717-243-107	Sequence 107, App
36	1260	98.7	251	5	US-10-717-243-111	Sequence 111, App
37	1212.5	94.9	513	5	US-10-926-731A-12	Sequence 12, Appl
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39	348	27.3	263	4	US-10-127-890-4	Sequence 4, Appli
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41	346	27.1	267	4	US-10-282-935-1	Sequence 1, Appli
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44	346	27.1	267	5	US-10-717-243-1	Sequence 1, Appli
45	346	27.1	268	6	US-11-010-795-24	Sequence 24, Appl

ALIGNMENTS

RESULT 1

US-10-127-890-101

; Sequence 101, Application US/10127890

; Publication No. US20030166196A1

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; Carroll, Stephen F.

; Studnika, Gary M.

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; Proteins

; NUMBER OF SEQUENCES: 173

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: McAndrews, Held & Malloy, Ltd.

; STREET: 500 West Madison Street, 34th floor

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60661

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/10/127,890

; FILING DATE: 23-Apr-2002

; CLASSIFICATION:

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US/08/646,360

; FILING DATE: 13-MAY-1996

; APPLICATION NUMBER: PCT/US94/05348

; FILING DATE: 12-MAY-1994

; APPLICATION NUMBER: US 08/064,691

; FILING DATE: 12-MAY-1993

; APPLICATION NUMBER: US 07/988,430

; FILING DATE: 09-DEC-1992

; APPLICATION NUMBER: US 07/901,707


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;          FILING DATE: 19-JUN-1992
;          APPLICATION NUMBER: US 07/787,567
;          FILING DATE: 04-NOV-1991
;  ATTORNEY/AGENT INFORMATION:
;          NAME: McNicholas, Janet M.
;          REGISTRATION NUMBER: 32,918
;          REFERENCE/DOCKET NUMBER: 200-70.P4
;  TELECOMMUNICATION INFORMATION:
;          TELEPHONE: 312/707-8889
;          TELEFAX: 312/707-9155
;          TELEX: 650 388-1248
;  INFORMATION FOR SEQ ID NO: 101:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH: 251 amino acids
;      TYPE: amino acid
;      TOPOLOGY: linear
;    MOLECULE TYPE: protein
;    SEQUENCE DESCRIPTION: SEQ ID NO: 101:
US-10-127-890-101

Query Match      100.0%; Score 1277; DB 4; Length 251;
Best Local Similarity 100.0%; Pred. No. 1.3e-115;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      1 GLDTSVFSTKGATYITYVNFNLNLRVKKLKEGNSHGIPLLRKKADDPGKAFVLVALSNDN 60
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Db      1 GLDTSVFSTKGATYITYVNFNLNLRVKKLKEGNSHGIPLLRKKADDPGKAFVLVALSNDN 60

Qy      61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
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Db      61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
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Db      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180

Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYTAVDQVKPKI 240
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Db      181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYTAVDQVKPKI 240

Qy      241 ALLKFVDKDPK 251
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Db      241 ALLKFVDKDPK 251

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RESULT 2
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; Sequence 101, Application US/10717243
; Publication No. US20050054835A1
;  GENERAL INFORMATION:
;    APPLICANT: Better, Marc D.
;              Carroll, Stephen F.
;              Studnika, Gary M.
;    TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
;                      Proteins
;    NUMBER OF SEQUENCES: 169
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE: McAndrews, Held & Malloy, Ltd.
;      STREET: 500 West Madison Street, 34th floor
;      CITY: Chicago
;      STATE: Illinois
;      COUNTRY: USA
;      ZIP: 60661
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE: Floppy disk
;      COMPUTER: IBM PC compatible
;      OPERATING SYSTEM: PC-DOS/MS-DOS
;      SOFTWARE: PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER: US/10/717,243
;      FILING DATE: 18-Nov-2003
;      CLASSIFICATION: 530
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER: US/08/839,765
;      FILING DATE: 15-APR-1997
;      APPLICATION NUMBER: US 08/425,336

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; FILING DATE: 18-APR-1995
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 11022US09/200-70.P3.C3
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 101:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 101:
US-10-717-243-101

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Query Match      100.0%; Score 1277; DB 5; Length 251;
Best Local Similarity 100.0%; Pred. No. 1.3e-115;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db      1 GLDTVSFSTKGATYITYVNFNLRLVRLKPEGNHSHGIPLLRKKADDPGKAFVLVALSNDN 60
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Qy     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
|
Db     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
|
Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
|
Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
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RESULT 3

US-10-127-890-99

; Sequence 99, Application US/10127890

; Publication No. US20030166196A1

GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; Carroll, Stephen F.

; Studnika, Gary M.

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
Proteins

; NUMBER OF SEQUENCES: 173

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: McAndrews, Held & Malloy, Ltd.

; STREET: 500 West Madison Street, 34th floor

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60661

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/10/127,890

```

; FILING DATE: 23-Apr-2002
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/646,360
; FILING DATE: 13-MAY-1996
; APPLICATION NUMBER: PCT/US94/05348
; FILING DATE: 12-MAY-1994
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 200-70.P4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 99:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 99:
US-10-127-890-99

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Query Match          99.7%; Score 1273; DB 4; Length 251;
Best Local Similarity 99.6%; Pred. No. 3.3e-115;
Matches 250; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy      1 GLDTVSFSTKGATYITYVNFNLRLVRLKPEGNHSHGIPLLRKKADDPGKAFVLVALSNDN 60
        |||
Db      1 GLDTVSFSTKGATYITYVNFNLRLVRLKPEGNHSHGIPLLRKKADDPGKAFVLVALSNDN 60

Qy      61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        |||
Db      61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy      121 AYRETTDLGIEPLRIGIKKL DENAIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
        |||
Db      121 AYRETTDLGIEPLRIGIKKL DENAIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180

Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTS GANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
        |||
Db      181 FQQRIRPANNTISLENKWGKLSFQIRTS GANGMFSEAVELERANGKKYYVTAVDQVKPKI 240

Qy      241 ALLKFVDKDPK 251
        |||
Db      241 ALLKFVDKDPK 251

```

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RESULT 4
US-10-127-890-100
; Sequence 100, Application US/10127890
; Publication No. US20030166196A1
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
;           Carroll, Stephen F.
;           Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
;                   Proteins
; NUMBER OF SEQUENCES: 173
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:

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; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/127,890
; FILING DATE: 23-Apr-2002
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/646,360
; FILING DATE: 13-MAY-1996
; APPLICATION NUMBER: PCT/US94/05348
; FILING DATE: 12-MAY-1994
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 200-70.P4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 100:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 100:
US-10-127-890-100

```

```

Query Match          99.7%; Score 1273; DB 4; Length 251;
Best Local Similarity 99.6%; Pred. No. 3.3e-115;
Matches 250; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy      1 GLDTSVFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKADDPGKAFVLVALSNDN 60
        |||
Db      1 GLDTSVFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKADDPGKCFVLVALSNDN 60

Qy      61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        |||
Db      61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
        |||
Db      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180

Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTSYGANGMFSEAVELERANGKYYVTAVDQVKPKI 240
        |||
Db      181 FQQRIRPANNTISLENKWGKLSFQIRTSYGANGMFSEAVELERANGKYYVTAVDQVKPKI 240

Qy      241 ALLKFVDKDPK 251
        |||
Db      241 ALLKFVDKDPK 251

```

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RESULT 5
US-10-717-243-99
; Sequence 99, Application US/10717243
; Publication No. US20050054835A1
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
;           Carroll, Stephen F.
;           Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
;                   Proteins
; NUMBER OF SEQUENCES: 169
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.

```

```

; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/717,243
; FILING DATE: 18-Nov-2003
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/839,765
; FILING DATE: 15-APR-1997
; APPLICATION NUMBER: US 08/425,336
; FILING DATE: 18-APR-1995
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 11022US09/200-70.P3.C3
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 99:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 99:
US-10-717-243-99

```

```

Query Match          99.7%; Score 1273; DB 5; Length 251;
Best Local Similarity 99.6%; Pred. No. 3.3e-115;
Matches 250; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```

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Qy      1 GLDTSVSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKADDPGKAFVLVALSNDN 60
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 GLDTSVSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDDPGKAFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKL DENAIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 AYRETTDLGIEPLRIGIKKL DENAIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
        ||||||||
Db    241 ALLKFVDKDPK 251

```

```

RESULT 6
US-10-717-243-100
; Sequence 100, Application US/10717243
; Publication No. US20050054835A1
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; Carroll, Stephen F.

```

```

; Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; Proteins
; NUMBER OF SEQUENCES: 169
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/717,243
; FILING DATE: 18-Nov-2003
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/839,765
; FILING DATE: 15-APR-1997
; APPLICATION NUMBER: US 08/425,336
; FILING DATE: 18-APR-1995
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 11022US09/200-70.P3.C3
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 100:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 100:
US-10-717-243-100

```

```

Query Match          99.7%; Score 1273; DB 5; Length 251;
Best Local Similarity 99.6%; Pred. No. 3.3e-115;
Matches 250; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```

```

Qy      1 GLDTSVSFSTKGATYITYVNFNLRLVRLKPEGNSHGIPLLRKKADDPGKAFVLVALSNDN 60
        |||
Db      1 GLDTSVSFSTKGATYITYVNFNLRLVRLKPEGNSHGIPLLRKKADDPGKCFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        |||
Db     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
        |||
Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSYGANGMFSEAVELEERANGKKYYVTAVDQVKPKI 240
        |||
Db    181 FQQRIRPANNTISLENKWGKLSFQIRTSYGANGMFSEAVELEERANGKKYYVTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
        |||
Db    241 ALLKFVDKDPK 251

```

RESULT 7

US-09-765-527-247
; Sequence 247, Application US/09765527
; Patent No. US20020006638A1
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; TITLE OF INVENTION: Methods for Recombinant Microbial Production of
; Fusion Proteins and BPI-Derived Peptides
; NUMBER OF SEQUENCES: 265
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/765,527
; FILING DATE: 18-Jan-2001
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/621,803
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Borun, Michael F.
; REGISTRATION NUMBER: 25,447
; REFERENCE/DOCKET NUMBER: 27129/33199
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 247:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 247:
US-09-765-527-247

Query Match 99.4%; Score 1269; DB 3; Length 251;
Best Local Similarity 99.2%; Pred. No. 8e-115;
Matches 249; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

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Qy      1 GLDTSVSFSTKGATYITYVNFNLRLVRLKPEGNHSHGIPLLRKKADDPGKAFVLVALSNDN 60
        |||
Db      1 GLDTSVSFSTKGATYITYVNFNLRLVRLKPEGNHSHGIPLLRKKCDDPGKCFVLVALSNDN 60

Qy      61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        |||
Db      61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIASSLLVVIQMVSEAAFTFIENQIRNN 180
        |||
Db      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIASSLLVVIQMVSEAAFTFIENQIRNN 180

Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTSANGMFSEAVELERANGKYYVTAVDQVKPKI 240
        |||
Db      181 FQQRIRPANNTISLENKWGKLSFQIRTSANGMFSEAVELERANGKYYVTAVDQVKPKI 240

Qy      241 ALLKFVDKDPK 251
        |||
Db      241 ALLKFVDKDPK 251

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RESULT 8

US-10-127-890-2

; Sequence 2, Application US/10127890
; Publication No. US20030166196A1
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; Carroll, Stephen F.
; Studnika, Gary M.

```

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; Proteins
; NUMBER OF SEQUENCES: 173
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/127,890
; FILING DATE: 23-Apr-2002
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/646,360
; FILING DATE: 13-MAY-1996
; APPLICATION NUMBER: PCT/US94/05348
; FILING DATE: 12-MAY-1994
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 200-70.P4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 2:
US-10-127-890-2

```

```

Query Match          99.4%; Score 1269; DB 4; Length 251;
Best Local Similarity 99.2%; Pred. No. 8e-115;
Matches 249; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

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Qy      1 GLDTVSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKADDPGKAFVLVALSNDN 60
        ||||||||||||||||||||||||||||||||||||||||| |||| |||||||||
Db      1 GLDTVSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        ||||||||||||||||||||||||||||||||||||||||| |||| |||||||||
Db     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
        ||||||||||||||||||||||||||||||||||||||||| |||| |||||||||
Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
        ||||||||||||||||||||||||||||||||||||||||| |||| |||||||||
Db    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
        |||||||||
Db    241 ALLKFVDKDPK 251

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RESULT 9
US-10-127-890-110

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; Sequence 110, Application US/10127890
; Publication No. US20030166196A1
; GENERAL INFORMATION:
;   APPLICANT: Better, Marc D.
;             Carroll, Stephen F.
;             Studnika, Gary M.
;   TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
;                     Proteins
;   NUMBER OF SEQUENCES: 173
;   CORRESPONDENCE ADDRESS:
;     ADDRESSEE: McAndrews, Held & Malloy, Ltd.
;     STREET: 500 West Madison Street, 34th floor
;     CITY: Chicago
;     STATE: Illinois
;     COUNTRY: USA
;     ZIP: 60661
;   COMPUTER READABLE FORM:
;     MEDIUM TYPE: Floppy disk
;     COMPUTER: IBM PC compatible
;     OPERATING SYSTEM: PC-DOS/MS-DOS
;     SOFTWARE: PatentIn Release #1.0, Version #1.25
;   CURRENT APPLICATION DATA:
;     APPLICATION NUMBER: US/10/127,890
;     FILING DATE: 23-Apr-2002
;     CLASSIFICATION:
;   PRIOR APPLICATION DATA:
;     APPLICATION NUMBER: US/08/646,360
;     FILING DATE: 13-MAY-1996
;     APPLICATION NUMBER: PCT/US94/05348
;     FILING DATE: 12-MAY-1994
;     APPLICATION NUMBER: US 08/064,691
;     FILING DATE: 12-MAY-1993
;     APPLICATION NUMBER: US 07/988,430
;     FILING DATE: 09-DEC-1992
;     APPLICATION NUMBER: US 07/901,707
;     FILING DATE: 19-JUN-1992
;     APPLICATION NUMBER: US 07/787,567
;     FILING DATE: 04-NOV-1991
;   ATTORNEY/AGENT INFORMATION:
;     NAME: McNicholas, Janet M.
;     REGISTRATION NUMBER: 32,918
;     REFERENCE/DOCKET NUMBER: 200-70.P4
;   TELECOMMUNICATION INFORMATION:
;     TELEPHONE: 312/707-8889
;     TELEFAX: 312/707-9155
;     TELEX: 650 388-1248
;   INFORMATION FOR SEQ ID NO: 110:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH: 251 amino acids
;       TYPE: amino acid
;       TOPOLOGY: linear
;     MOLECULE TYPE: protein
;     SEQUENCE DESCRIPTION: SEQ ID NO: 110:
US-10-127-890-110

```

```

Query Match          99.4%; Score 1269; DB 4; Length 251;
Best Local Similarity 99.6%; Pred. No. 8e-115;
Matches 250; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy      1 GLDTVSFSTKGATYITYVNFLNELRVKLPKPEGNHSHGIPLLRKKADDPGKAFVLVALSNDN 60
Db      1 GLDTVSFSTCGATYITYVNFLNELRVKLPKPEGNHSHGIPLLRKKADDPGKAFVLVALSNDN 60
Qy     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
Db     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
Db    181 FQQRIRPANNTISLENKWGKLSFQIRTSANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
Qy    241 ALLKFVDKDPK 251

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|||||
Db 241 ALLKFVDKDPK 251

RESULT 10

US-10-717-243-2

; Sequence 2, Application US/10717243

; Publication No. US20050054835A1

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; Carroll, Stephen F.

; Studnika, Gary M.

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; Proteins

; NUMBER OF SEQUENCES: 169

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: McAndrews, Held & Malloy, Ltd.

; STREET: 500 West Madison Street, 34th floor

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60661

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/10/717,243

; FILING DATE: 18-Nov-2003

; CLASSIFICATION: 530

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US/08/839,765

; FILING DATE: 15-APR-1997

; APPLICATION NUMBER: US 08/425,336

; FILING DATE: 18-APR-1995

; APPLICATION NUMBER: US 08/064,691

; FILING DATE: 12-MAY-1993

; APPLICATION NUMBER: US 07/988,430

; FILING DATE: 09-DEC-1992

; APPLICATION NUMBER: US 07/901,707

; FILING DATE: 19-JUN-1992

; APPLICATION NUMBER: US 07/787,567

; FILING DATE: 04-NOV-1991

; ATTORNEY/AGENT INFORMATION:

; NAME: McNicholas, Janet M.

; REGISTRATION NUMBER: 32,918

; REFERENCE/DOCKET NUMBER: 11022US09/200-70.P3.C3

; TELECOMMUNICATION INFORMATION: *

; TELEPHONE: 312/707-8889

; TELEFAX: 312/707-9155

; TELEX: 650 388-1248

; INFORMATION FOR SEQ ID NO: 2:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 251 amino acids

; TYPE: amino acid

; TOPOLOGY: linear

; MOLECULE TYPE: protein

; SEQUENCE DESCRIPTION: SEQ ID NO: 2:

US-10-717-243-2

Query Match 99.4%; Score 1269; DB 5; Length 251;

Best Local Similarity 99.2%; Pred. No. 8e-115;

Matches 249; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

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Qy      1 GLDTSVFSFKGATYITYVNFLELRVKLKPEGNSHGIPLLRKKADDPGKAFVLVALSNDN 60
        |||
Db      1 GLDTSVFSFKGATYITYVNFLELRVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        |||
Db     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKL DENAIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
        |||
Db    121 AYRETTDLGIEPLRIGIKKL DENAIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
```

```

Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240

Qy      241 ALLKFVDKDPK 251
        ||||||||||
Db      241 ALLKFVDKDPK 251

```

RESULT 11

US-10-717-243-110

; Sequence 110, Application US/10717243

; Publication No. US20050054835A1

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; Carroll, Stephen F.

; Studnika, Gary M.

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; Proteins

; NUMBER OF SEQUENCES: 169

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: McAndrews, Held & Malloy, Ltd.

; STREET: 500 West Madison Street, 34th floor

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60661

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/10/717,243

; FILING DATE: 18-Nov-2003

; CLASSIFICATION: 530

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US/08/839,765

; FILING DATE: 15-APR-1997

; APPLICATION NUMBER: US 08/425,336

; FILING DATE: 18-APR-1995

; APPLICATION NUMBER: US 08/064,691

; FILING DATE: 12-MAY-1993

; APPLICATION NUMBER: US 07/988,430

; FILING DATE: 09-DEC-1992

; APPLICATION NUMBER: US 07/901,707

; FILING DATE: 19-JUN-1992

; APPLICATION NUMBER: US 07/787,567

; FILING DATE: 04-NOV-1991

; ATTORNEY/AGENT INFORMATION:

; NAME: McNicholas, Janet M.

; REGISTRATION NUMBER: 32,918

; REFERENCE/DOCKET NUMBER: 11022US09/200-70.P3.C3

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 312/707-8889

; TELEFAX: 312/707-9155

; TELEX: 650 388-1248

; INFORMATION FOR SEQ ID NO: 110:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 251 amino acids

; TYPE: amino acid

; TOPOLOGY: linear

; MOLECULE TYPE: protein

; SEQUENCE DESCRIPTION: SEQ ID NO: 110:

US-10-717-243-110

Query Match 99.4%; Score 1269; DB 5; Length 251;

Best Local Similarity 99.6%; Pred. No. 8e-115;

Matches 250; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy      1 GLDTSVSFSTKGATYITYVNFNLNLRVCLKPEGNSHGIPLLRKKADDPGKAFVLVALSNDN 60
        |||||||
Db      1 GLDTSVSFSTCGATYITYVNFNLNLRVCLKPEGNSHGIPLLRKKADDPGKAFVLVALSNDN 60

```

```

Qy      61 GOLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

```

```

Db      61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
Qy      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
Db      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
Db      181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
Qy      241 ALLKFVDKDPK 251
Db      241 ALLKFVDKDPK 251

```

RESULT 12

```

US-10-074-596-1
; Sequence 1, Application US/10074596
; Publication No. US20030176331A1
; GENERAL INFORMATION:
; APPLICANT: ROSENBLUM, MICHAEL G.
; APPLICANT: CHEUNG, LAWRENCE
; TITLE OF INVENTION: MODIFIED PROTEINS, DESIGNER TOXINS, AND METHODS OF
; TITLE OF INVENTION: MAKING THEEOF
; FILE REFERENCE: CLFR:007US
; CURRENT APPLICATION NUMBER: US/10/074,596
; CURRENT FILING DATE: 2002-02-12
; PRIOR APPLICATION NUMBER: 60/268,402
; PRIOR FILING DATE: 2001-02-12
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 316
; TYPE: PRT
; ORGANISM: Gelonium multiflorum
US-10-074-596-1

```

```

Query Match          99.4%; Score 1269; DB 4; Length 316;
Best Local Similarity 99.2%; Pred. No. 1.1e-114;
Matches 249; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

```

```

Qy      1 GLDTSVFSTKGATYITYVNFNLNLRVVKLKPEGNSHGIPLLRKKADDPGKAFVLVALSNDN 60
Db      47 GLDTSVFSTKGATYITYVNFNLNLRVVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 106
Qy      61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
Db      107 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 166
Qy      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
Db      167 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 226
Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
Db      227 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 286
Qy      241 ALLKFVDKDPK 251
Db      287 ALLKFVDKDPK 297

```

RESULT 13

```

US-10-964-195-13
; Sequence 13, Application US/10964195
; Publication No. US20050163774A1
; GENERAL INFORMATION:
; APPLICANT: Rosenblum et al.
; TITLE OF INVENTION: Immunotoxins Directed Against c-erbB-2 (HER-2/Neu)
; TITLE OF INVENTION: Related Surface Antigens
; FILE REFERENCE: D5425CIP2
; CURRENT APPLICATION NUMBER: US/10/964,195
; CURRENT FILING DATE: 2004-10-13
; PRIOR APPLICATION NUMBER: US/09/320,156
; PRIOR FILING DATE: 1999-05-26

```

```

; PRIOR APPLICATION NUMBER: 08/404,499
; PRIOR FILING DATE: 1995-03-17
; NUMBER OF SEQ ID NOS: 14
; SEQ ID NO 13
; LENGTH: 498
; TYPE: PRT
; ORGANISM: Artificial
; FEATURE:
; OTHER INFORMATION: Polypeptide encoded by the scFv23-gelonin immunotoxin
US-10-964-195-13

```

```

Query Match          99.4%; 'Score 1269; DB 5; Length 498;
Best Local Similarity 99.2%; Pred. No. 2.1e-114;
Matches 249; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

```

```

Qy      1 GLDTSFSTKGATYITYVNFNLRLVRLKPEGNHSHGIPLLRKKADDPGKAFVLVALSNDN 60
          |||
Db      247 GLDTSFSTKGATYITYVNFNLRLVRLKPEGNHSHGIPLLRKKCDDPGKCFVLVALSNDN 306
          |||

Qy      61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
          |||
Db      307 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 366
          |||

Qy      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
          |||
Db      367 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 426
          |||

Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTSYGANGMFSEAVELERANGKYYVTAVDQVKPKI 240
          |||
Db      427 FQQRIRPANNTISLENKWGKLSFQIRTSYGANGMFSEAVELERANGKYYVTAVDQVKPKI 486
          |||

Qy      241 ALLKFVDKDPK 251
          |||
Db      487 ALLKFVDKDPK 497

```

RESULT 14

```

US-10-074-596-11
; Sequence 11, Application US/10074596
; Publication No. US20030176331A1
; GENERAL INFORMATION:
; APPLICANT: ROSENBLUM, MICHAEL G.
; APPLICANT: CHEUNG, LAWRENCE
; TITLE OF INVENTION: MODIFIED PROTEINS, DESIGNER TOXINS, AND METHODS OF
; TITLE OF INVENTION: MAKING THEEOF
; FILE REFERENCE: CLFR:007US
; CURRENT APPLICATION NUMBER: US/10/074,596
; CURRENT FILING DATE: 2002-02-12
; PRIOR APPLICATION NUMBER: 60/268,402
; PRIOR FILING DATE: 2001-02-12
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 11
; LENGTH: 507
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
US-10-074-596-11

```

```

Query Match          99.4%; Score 1269; DB 4; Length 507;
Best Local Similarity 99.2%; Pred. No. 2.1e-114;
Matches 249; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

```

```

Qy      1 GLDTSFSTKGATYITYVNFNLRLVRLKPEGNHSHGIPLLRKKADDPGKAFVLVALSNDN 60
          |||
Db      257 GLDTSFSTKGATYITYVNFNLRLVRLKPEGNHSHGIPLLRKKCDDPGKCFVLVALSNDN 316
          |||

Qy      61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
          |||
Db      317 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 376
          |||

Qy      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
          |||
Db      377 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 436
          |||

```

```

Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
          |||
Db      437 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 496

Qy      241 ALLKFVDKDPK 251
          |||
Db      497 ALLKFVDKDPK 507

```

RESULT 15

US-09-765-527-259

; Sequence 259, Application US/09765527

; Patent No. US20020006638A1

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; TITLE OF INVENTION: Methods for Recombinant Microbial Production of
Fusion Proteins and BPI-Derived Peptides

; NUMBER OF SEQUENCES: 265

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun

; STREET: 6300 Sears Tower, 233 South Wacker Drive

; CITY: Chicago

; STATE: Illinois

; COUNTRY: United States of America

; ZIP: 60606-6402

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/765,527

; FILING DATE: 18-Jan-2001

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 08/621,803

; FILING DATE:

; ATTORNEY/AGENT INFORMATION:

; NAME: Borun, Michael F.

; REGISTRATION NUMBER: 25,447

; REFERENCE/DOCKET NUMBER: 27129/33199

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 312/474-6300

; TELEFAX: 312/474-0448

; TELEX: 25-3856

; INFORMATION FOR SEQ ID NO: 259:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 293 amino acids

; TYPE: amino acid

; TOPOLOGY: linear

; MOLECULE TYPE: protein

; SEQUENCE DESCRIPTION: SEQ ID NO: 259:

US-09-765-527-259

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Query Match      99.1%; Score 1266; DB 3; Length 293;
Best Local Similarity 98.8%; Pred. No. 2e-114;
Matches 248; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

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Qy      1 GLDTVSFSTKGATYITYVNFNLRVKLKPEGNSHGIPLLRKKADDPGKAFVLVALSNDN 60
          |||
Db      23 GLDTVSFSTKGATYITYVNFNLRVKLKPEGNSHGIPLLRKKADDPGKCFVLVALSNDN 82

Qy      61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
          |||
Db      83 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGTYPSPLEGEK 142

Qy      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
          |||
Db      143 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 202

Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
          |||
Db      203 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 262

Qy      241 ALLKFVDKDPK 251
          |||
Db      263 ALLKFVDKDPK 273

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Search completed: July 20, 2006, 09:43:18
Job time : 81.5055 secs

SCORE 1.3 BuildDate: 12/06/2005

SCORE Search Results Details for Application 10717243 and Search Result us-10-717-243-101.rapbn.

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This page gives you Search Results detail for the Application 10717243 and Search Result us-10-717-243-101.rapbn.

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OM protein - protein search, using sw model

Run on: July 20, 2006, 09:40:39 ; Search time 14.8192 Seconds
(without alignments)
976.754 Million cell updates/sec

Title: US-10-717-243-101
Perfect score: 1277
Sequence: 1 GLDTVSFSTKGATYITYVNF.....AVDQVKPKIALLKFDKDPK 251

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 208217 seqs, 57668156 residues

Total number of hits satisfying chosen parameters: 208217

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_AA_New:*
1: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
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3: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US07_NEW_PUB.pep:*
4: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US08_NEW_PUB.pep:*
5: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*
6: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
7: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US11_NEW_PUB.pep:*
8: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US60_NEW_PUB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB ID	Description
1	346	27.1	267	7	US-11-263-537-1 Sequence 1, Appli
2	315	24.7	251	7	US-11-263-537-3 Sequence 3, Appli
3	128.5	10.1	282	6	US-10-449-902-56587 Sequence 56587, A
4	111.5	8.7	277	6	US-10-953-349-30545 Sequence 30545, A
5	111.5	8.7	277	7	US-11-056-355B-61236 Sequence 61236, A
6	111.5	8.7	281	6	US-10-953-349-30544 Sequence 30544, A
7	111.5	8.7	281	7	US-11-056-355B-61235 Sequence 61235, A
8	111.5	8.7	298	6	US-10-953-349-30543 Sequence 30543, A
9	111.5	8.7	298	7	US-11-056-355B-61234 Sequence 61234, A

10	110	8.6	298	6	US-10-449-902-39064	Sequence 39064, A
11	108.5	8.5	232	6	US-10-953-349-10528	Sequence 10528, A
12	108.5	8.5	245	6	US-10-953-349-10527	Sequence 10527, A
13	108.5	8.5	252	6	US-10-953-349-10526	Sequence 10526, A
14	95	7.4	876	6	US-10-471-571A-5500	Sequence 5500, Ap
15	89.5	7.0	296	6	US-10-449-902-41985	Sequence 41985, A
16	88.5	6.9	239	6	US-10-953-349-14022	Sequence 14022, A
17	88.5	6.9	239	7	US-11-056-355B-55899	Sequence 55899, A
18	88.5	6.9	248	6	US-10-953-349-14021	Sequence 14021, A
19	88.5	6.9	248	7	US-11-056-355B-55898	Sequence 55898, A
20	88.5	6.9	254	6	US-10-953-349-14020	Sequence 14020, A
21	88.5	6.9	254	7	US-11-056-355B-55897	Sequence 55897, A
22	87	6.8	767	6	US-10-449-902-56749	Sequence 56749, A
23	85	6.7	291	6	US-10-449-902-37995	Sequence 37995, A
24	84.5	6.6	219	6	US-10-953-349-5981	Sequence 5981, Ap
25	84.5	6.6	219	7	US-11-056-355B-23415	Sequence 23415, A
26	84.5	6.6	219	7	US-11-056-355B-24652	Sequence 24652, A
27	84.5	6.6	219	7	US-11-056-355B-28637	Sequence 28637, A
28	84.5	6.6	219	7	US-11-056-355B-32227	Sequence 32227, A
29	84.5	6.6	219	7	US-11-056-355B-40030	Sequence 40030, A
30	84.5	6.6	219	7	US-11-056-355B-100712	Sequence 100712, A
31	84.5	6.6	219	7	US-11-056-355B-111951	Sequence 111951, A
32	84.5	6.6	260	6	US-10-953-349-5980	Sequence 5980, Ap
33	84.5	6.6	260	7	US-11-056-355B-23414	Sequence 23414, A
34	84.5	6.6	260	7	US-11-056-355B-24651	Sequence 24651, A
35	84.5	6.6	260	7	US-11-056-355B-28636	Sequence 28636, A
36	84.5	6.6	260	7	US-11-056-355B-32226	Sequence 32226, A
37	84.5	6.6	260	7	US-11-056-355B-40029	Sequence 40029, A
38	84.5	6.6	260	7	US-11-056-355B-100711	Sequence 100711, A
39	84.5	6.6	260	7	US-11-056-355B-111950	Sequence 111950, A
40	84.5	6.6	278	6	US-10-953-349-5979	Sequence 5979, Ap
41	84.5	6.6	278	7	US-11-056-355B-23413	Sequence 23413, A
42	84.5	6.6	278	7	US-11-056-355B-24650	Sequence 24650, A
43	84.5	6.6	278	7	US-11-056-355B-28635	Sequence 28635, A
44	84.5	6.6	278	7	US-11-056-355B-32225	Sequence 32225, A
45	84.5	6.6	278	7	US-11-056-355B-40028	Sequence 40028, A

ALIGNMENTS

RESULT 1

US-11-263-537-1

```
; Sequence 1, Application US/11263537
; Publication No. US20060100135A1
; GENERAL INFORMATION:
; APPLICANT: VITETTA, ELLEN S.
; APPLICANT: GHETIE, VICTOR F.
; APPLICANT: SMALLSHAW, JOAN
; APPLICANT: BALUNA, ROXANA G.
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODIFYING TOXIC EFFECTS OF
; TITLE OF INVENTION: PROTEINACEOUS COMPOUNDS
; FILE REFERENCE: UTSD:884USC1
; CURRENT APPLICATION NUMBER: US/11/263,537
; CURRENT FILING DATE: 2005-10-31
; PRIOR APPLICATION NUMBER: 10/282,935
; PRIOR FILING DATE: 2002-10-29
; PRIOR APPLICATION NUMBER: 09/538,873
; PRIOR FILING DATE: 2000-03-30
; PRIOR APPLICATION NUMBER: 60/126,826
; PRIOR FILING DATE: 1999-03-30
; NUMBER OF SEQ ID NOS: 23
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 267
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: Peptide
US-11-263-537-1
```

```
Query Match      27.1%; Score 346; DB 7; Length 267;
Best Local Similarity 36.8%; Pred. No. 2.6e-23;
Matches 93; Conservative 45; Mismatches 99; Indels 16; Gaps 9;
```

```

Qy      5 VSFSTKGATYITYVNFNLRLVVKLKPEGN-SHGIPLLRKKADDP-GKAFVLVALSNDNGQ 62
      ::||:| ||| :| ||: :| :| : | ||:| : | :|:| |||
Db      9 INFTTAGATVQSYTNFIRAVRGRLLTGADVRHEIPVLPNRVGLPINQRFILVELSNHAEL 68

Qy      63 LAEIAIDVTSVYVVGQVRNRSYFFKDAPD-----AAYEGLFKNTIKTR--LHFGGSYPS 115
      :|:| |: |||: | :||| || | || : :| | ||:|
Db      69 SVTLALDVTNAYVVGYRAGNSAYFFH--PDNQEDAEATHLFTD-VQNRYTFAFGGNYDR 125

Qy      116 LEGEKA-YRETTDLGIEPLRIGIKKLDENAIIDNYKPTIASSLLVVIQMVSEAAARFTFIE 174
      || || :|| || | | : : | | :| |||:| ||| :||
Db      126 LEQLAGNLRNIELGNGLPEEAISALYYSTGGTQLPTLARSFIIICIQMISEAAARFYIE 185

Qy      175 NQIRN--NFQQRIRPANNTISLENKWKLSFQIRTSGANGMFSEAVELERANGKYYVTA 232
      :| :| | :|:| ||:| | :| | | :|:| || | :|
Db      186 GEMRTRIRYNRRSAPDPSVITLENSWGRSLTAIQESN-QGAFASPIQLQRRNGSKFSVYD 244

Qy      233 VDQVKPKIALLK 245
      | :| |||: :
Db      245 VSILIPIALMVY 257

```

RESULT 2

US-11-263-537-3

```

; Sequence 3, Application US/11263537
; Publication No. US20060100135A1
; GENERAL INFORMATION:
; APPLICANT: VITETTA, ELLEN S.
; APPLICANT: GHETIE, VICTOR F.
; APPLICANT: SMALLSHAW, JOAN
; APPLICANT: BALUNA, ROXANA G.
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODIFYING TOXIC EFFECTS OF
; TITLE OF INVENTION: PROTEINACEOUS COMPOUNDS
; FILE REFERENCE: UTSD:884USC1
; CURRENT APPLICATION NUMBER: US/11/263,537
; CURRENT FILING DATE: 2005-10-31
; PRIOR APPLICATION NUMBER: 10/282,935
; PRIOR FILING DATE: 2002-10-29
; PRIOR APPLICATION NUMBER: 09/538,873
; PRIOR FILING DATE: 2000-03-30
; PRIOR APPLICATION NUMBER: 60/126,826
; PRIOR FILING DATE: 1999-03-30
; NUMBER OF SEQ ID NOS: 23
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 251
; TYPE: PRT
; ORGANISM: Abrus precatorius
US-11-263-537-3

```

Query Match 24.7%; Score 315; DB 7; Length 251;
 Best Local Similarity 35.3%; Pred. No. 1.4e-20;
 Matches 90; Conservative 39; Mismatches 108; Indels 18; Gaps 8;

```

Qy      5 VSFSTKGATYITYVNFNLRLVVKLKPEGN-SHGIPLLRKKADDP-----GKAFVLVALSND 59
      : |||:| ||| :| | :| :| :| ||:| || :| |||
Db      5 IKFSTEGATSQSYKQFIEALRERLR-GGLIHDIPLV-----PDPTTLQERNRYITVELSNS 59

Qy      60 NGQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLE-G 118
      : : | : |||: ||| | : :||| :||| :| :| | : |' | :| ||
Db      60 DTESIEVGIDVTNAYVVAYRAGTQSYFLRDAPSSASDYLFTGTDQHSLPFYGTYGDLERW 119

Qy      119 EKAYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIASSLLVVIQMVSEAAARFTFIENQIR 178
      | : ||:| | || || | | :|:|:| ||| :| | :|
Db      120 AHQSQQIPLGLQALTHGISFFRSGGNDN---EEKARTLIVIIQMVAARFRYISNRVR 176

Qy      179 NNFQ--QRIRPANNTISLENKWKLSFQIRTSGANGMFSEAVELERANGKYYVTAVDQ- 235
      : | :| :| ||| | || : :| | | : | : :
Db      177 VSIQTGTAFQPDAAAMISLENNWDNLSRGVQES-VQDTFPNQVTLTNIRNEPVIIVDSLSP 235

Qy      236 VKPKIALLKFDKDP 250
      :||: || |
Db      236 TVAVLALMLFVCNPP 250

```

RESULT 3

US-10-449-902-56587

; CURRENT FILING DATE: 2004-09-30
; NUMBER OF SEQ ID NOS: 40252
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 30544
; LENGTH: 281
; TYPE: PRT
; ORGANISM: Triticum aestivum
US-10-953-349-30544

Query Match 8.7%; Score 111.5; DB 6; Length 281;
Best Local Similarity 21.9%; Pred. No. 0.021;
Matches 59; Conservative 49; Mismatches 116; Indels 45; Gaps 11;

```
Qy      2 LDTVSFSTKGATYITYVNFNLNLRVCLK-PEGNSHGIPLLRKKADD--PGKAFVLVALSN 58
      | | : | : | : | | : | | : | : | | : | : | : | : | : | : | :
Db      13 LFTATFNQV-ASSTDYVTFITGIRNKLNRNPGQSSHNRPVLPPIEPNVPPSRWFHIVLKTS 71

Qy      59 DNGQLAEIAIDVTSVYVVGQVRNRSYFFKD---APDAAYEGLFKNTIKTRLHFGGSYPS 115
      : | : | : | : | : | : | : | : | : | : | : | : | : | : | :
Db      72 PANTGLTLATRADNLYWEGFKSSDGTWELTPGLIPGATYVG-----FGGTYRD 120

Qy      116 LEGEKAYRETTDLGIEPLRIGIKKL----DENAIDNYKPTEIASSLLVVIQMVSEARFT 171
      | | : | : | : | : | : | : | : | : | : | : | : | : | : | :
Db      121 LLGDTDKLTNVALGRQQMADAVTALHGRTKADKTS GPKQQQAREAVTTLLLMVHEATRFQ 180

Qy      172 FIENQIRNNFQQRIRPANNTISLENKWGKLSFQIRTS GANGM--FSEAV---ELERANGK 226
      : : : : : : : | | | : | : | : | : | : | : | : | : | :
Db      181 TVSGFVAGLLHPK-----TVEKSGKISNELKAQ-VNGWQDLSEALLKTDKPPAGK 231

Qy      227 -----KYYVTAVDQVKPKIALLKFV 246
      | | : | : | : | : | : | : | : | : | : | : | : | : | : | :
Db      232 PPAKFTPIEKMGVRTAEQAAATLGILLFV 260
```

RESULT 7

US-11-056-355B-61235
; Sequence 61235, Application US/11056355B
; Publication No. US20060150283A1
; GENERAL INFORMATION:
; APPLICANT: Brover, Vyacheslav
; APPLICANT: Alexandrov, Nickolai
; TITLE OF INVENTION: Sequence Determined DNA Fragments and Corresponding
; TITLE OF INVENTION: Polypeptides Encoded Thereby
; FILE REFERENCE: 2750-1590PUS2
; CURRENT APPLICATION NUMBER: US/11/056,355B
; CURRENT FILING DATE: 2005-02-14
; PRIOR APPLICATION NUMBER: 60/544,190
; PRIOR FILING DATE: 2004-02-13
; NUMBER OF SEQ ID NOS: 119966
; SEQ ID NO 61235
; LENGTH: 281
; TYPE: prt
; ORGANISM: Triticum aestivum
; FEATURE:
; NAME/KEY: peptide
; LOCATION: (1)..(281)
; OTHER INFORMATION: Ceres Seq. ID no. 13661989
US-11-056-355B-61235

Query Match 8.7%; Score 111.5; DB 7; Length 281;
Best Local Similarity 21.9%; Pred. No. 0.021;
Matches 59; Conservative 49; Mismatches 116; Indels 45; Gaps 11;

```
Qy      2 LDTVSFSTKGATYITYVNFNLNLRVCLK-PEGNSHGIPLLRKKADD--PGKAFVLVALSN 58
      | | : | : | : | | : | | : | : | | : | : | : | : | : | : | :
Db      13 LFTATFNQV-ASSTDYVTFITGIRNKLNRNPGQSSHNRPVLPPIEPNVPPSRWFHIVLKTS 71

Qy      59 DNGQLAEIAIDVTSVYVVGQVRNRSYFFKD---APDAAYEGLFKNTIKTRLHFGGSYPS 115
      : | : | : | : | : | : | : | : | : | : | : | : | : | : | :
Db      72 PANTGLTLATRADNLYWEGFKSSDGTWELTPGLIPGATYVG-----FGGTYRD 120

Qy      116 LEGEKAYRETTDLGIEPLRIGIKKL----DENAIDNYKPTEIASSLLVVIQMVSEARFT 171
      | | : | : | : | : | : | : | : | : | : | : | : | : | : | :
Db      121 LLGDTDKLTNVALGRQQMADAVTALHGRTKADKTS GPKQQQAREAVTTLLLMVHEATRFQ 180

Qy      172 FIENQIRNNFQQRIRPANNTISLENKWGKLSFQIRTS GANGM--FSEAV---ELERANGK 226
```

```

      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db      181 TVSGFVAGLLHPK-----TVEKKSGKISNELKAQ-VNGWQDLSEALLKTDKPPAGK 231

Qy      227 -----KYYVTAVDQVKPKIALLKFEV 246
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db      232 PPAKFTPIEKMVGVRTAEQAAATLGILLFV 260

```

RESULT 8

```

US-10-953-349-30543
; Sequence 30543, Application US/10953349
; Publication No. US20060107345A1
; GENERAL INFORMATION:
; APPLICANT: ALEXANDROV, Nickolai et al.
; TITLE OF INVENTION: SEQUENCE-DETERMINED DNA FRAGMENTS AND CORRESPONDING POLYPEPTIDES
; TITLE OF INVENTION: ENCODED THERBY
; FILE REFERENCE: 2750-1579PUS2
; CURRENT APPLICATION NUMBER: US/10/953,349
; CURRENT FILING DATE: 2004-09-30
; NUMBER OF SEQ ID NOS: 40252
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 30543
; LENGTH: 298
; TYPE: PRT
; ORGANISM: Triticum aestivum
US-10-953-349-30543

```

```

Query Match          8.7%; Score 111.5; DB 6; Length 298;
Best Local Similarity 21.9%; Pred. No. 0.023;
Matches 59; Conservative 49; Mismatches 116; Indels 45; Gaps 11;

```

```

Qy      2 LDTVSFSTKGATYITYVNFNLNRVKLK-PEGNSHGIPLLRKKADD--PGKAFVLVALSN 58
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db      30 LFTATFNQV-ASSTDYVTFITGIRNKLNRNPGQSSHNRPVLPPIEPNVPPSRWFHIVLKTS 88

Qy      59 DNGQLAEIAIDVTSVYVVGQVRNRSYFFKD---APDAAYEGLFKNTIKTRLHFGGSYPS 115
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db      89 PANTGLTLATRADNLYWEGFKSSDGTWELTPGLIPGATYVG-----FGGTYRD 137

Qy      116 LEGEKAYRETTDLGIEPLRIGIKKL----DENAIDNYKPTEIASSLLVVIQMVSEARFT 171
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db      138 LLGDTDKLTNVALGRQMQADAVTALHGRTKADKTSQPKQQQAREAVTLLLMVHEATRFQ 197

Qy      172 FIENQIRNRFQQRIRPANNTISLENKWKLSFQIRTSANGM--FSEAV---ELERANGK 226
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db      198 TVSGFVAGLLHPK-----TVEKKSGKISNELKAQ-VNGWQDLSEALLKTDKPPAGK 248

Qy      227 -----KYYVTAVDQVKPKIALLKFEV 246
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db      249 PPAKFTPIEKMVGVRTAEQAAATLGILLFV 277

```

RESULT 9

```

US-11-056-355B-61234
; Sequence 61234, Application US/11056355B
; Publication No. US20060150283A1
; GENERAL INFORMATION:
; APPLICANT: Brover, Vyacheslav
; APPLICANT: Alexandrov, Nickolai
; TITLE OF INVENTION: Sequence Determined DNA Fragments and Corresponding
; TITLE OF INVENTION: Polypeptides Encoded Thereby
; FILE REFERENCE: 2750-1590PUS2
; CURRENT APPLICATION NUMBER: US/11/056,355B
; CURRENT FILING DATE: 2005-02-14
; PRIOR APPLICATION NUMBER: 60/544,190
; PRIOR FILING DATE: 2004-02-13
; NUMBER OF SEQ ID NOS: 119966
; SEQ ID NO 61234
; LENGTH: 298
; TYPE: prt
; ORGANISM: Triticum aestivum
; FEATURE:
; NAME/KEY: peptide
; LOCATION: (1)..(298)
; OTHER INFORMATION: Ceres Seq. ID no. 13661988
US-11-056-355B-61234

```

Query Match 8.7%; Score 111.5; DB 7; Length 298;
Best Local Similarity 21.9%; Pred. No. 0.023;
Matches 59; Conservative 49; Mismatches 116; Indels 45; Gaps 11;

```
Qy      2 LDTVSESTKGATYITYVNFNLRLVKLK-PEGNSHGIPLLRKKADD--PGKAFVLVALSN 58
      | | : | : | : | | : | | | : | | : | : | : | : | : | : | : | :
Db      30 LFTATFNVQ-ASSTDYVTFITGIRNKLNRNPGQSSHNRPVLPPIEPNVPPSRWFHIVLKTS 88

Qy      59 DNGQLAEIAIDVTSVYVVGQVNRNSYFFKD---APDAAAYEGLFKNTIKTRLHFGGSYPS 115
      : | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
Db      89 PANTGLTLATRADNLYWEGFKSSDGTWELTPGLIPGATYVG-----FGGTYRD 137

Qy      116 LEGEKAYRETTDLGIEPLRIGIKKL----DENAIIDNYKPTIEASSLLVVIQMVSEAAARFT 171
      | | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
Db      138 LLGDTDKLTNVALGRQOMADAVTALHGRTKADKTSQPKQQQAREAVTLLLMVHEATRQ 197

Qy      172 FIENQIRNNFQQRIRPANNTISLENKWGKLSFQIRTSGANGM--FSEAV---ELERANGK 226
      : : : : : | | | : | : | : | : | : | : | : | : | : | : |
Db      198 TVSGFVAGLLHPK-----TVEKKSGKISNELKAQ-VNGWQDLSEALLKTDKPPAGK 248

Qy      227 -----KYYVTAVDQVKPKIALLLKFV 246
      | | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
Db      249 PPAKFTPIEKMGVRTAEQAAATLGILLFV 277
```

RESULT 10

US-10-449-902-39064
; Sequence 39064, Application US/10449902
; Publication No. US20060123505A1
; GENERAL INFORMATION:
; APPLICANT: National Institute of Agrobiological Sciences.
; APPLICANT: Bio-oriented Technology Research Advancement Institution.
; APPLICANT: The Institute of Physical and Chemical Research.
; APPLICANT: Foundation for Advancement of International Science.
; TITLE OF INVENTION: FULL-LENGTH PLANT cDNA AND USES THEREOF
; FILE REFERENCE: MOA-A0205Y1-US
; CURRENT APPLICATION NUMBER: US/10/449,902
; CURRENT FILING DATE: 2003-05-29
; PRIOR APPLICATION NUMBER: JP 2002-203269
; PRIOR FILING DATE: 2002-05-30
; PRIOR APPLICATION NUMBER: JP 2002-383870
; PRIOR FILING DATE: 2002-12-11
; NUMBER OF SEQ ID NOS: 56791
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 39064
; LENGTH: 298
; TYPE: PRT
; ORGANISM: Oryza sativa
US-10-449-902-39064

Query Match 8.6%; Score 110; DB 6; Length 298;
Best Local Similarity 21.1%; Pred. No. 0.031;
Matches 49; Conservative 41; Mismatches 108; Indels 34; Gaps 6;

```
Qy      21 LNELRVKLKPEGNSHGIPLLRKKADD--PGKAFVLVALSNDNGQLAEIAIDVTSVYVVG 78
      | | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
Db      64 LNRPEVMVPEDH----PVLAPQYDDTVPPELRLPKLVANGDKTATLALRDSNIYFIGF 119

Qy      79 QVRNRSYF-FKDAPDAAAYEGLFKNTIKTR-LHFGGSYPSLEGEKAYRETTDLGIEPLRIG 136
      : : | | | | : : | | | | : | : | : | : | : | : | : | : | : |
Db      120 ANKAGQWFSFKDRND-----LPPSFRARPLSFGVDYASIAAGFRKNLPNYPILGRRQTEWA 173

Qy      137 IKKLDENAIIDNYKPTIEASSLLVVIQMVSEAAARFTFIENQIRNNFQQRIRPANNTISLEN 196
      : | | | : : | : : : : | | | : | : | : | : | : | : | : |
Db      174 VKVLESDPNRTDEATIKRAVVIILLTFCEALRFFPIRNAVEIGWDSVAYITSTDADRLV 233

Qy      197 KWGKLSFQIRTSGANG-----MFSEAVELEERANGKKY 228
      | | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
Db      234 CWGQISYMLEYSFMSGHSWDSEEQRTRLKNLARDCKIFNEPQALETVDVLEY 285
```

RESULT 11

US-10-953-349-10528
; Sequence 10528, Application US/10953349
; Publication No. US20060107345A1

```

; GENERAL INFORMATION:
; APPLICANT: ALEXANDROV, Nickolai et al.
; TITLE OF INVENTION: SEQUENCE-DETERMINED DNA FRAGMENTS AND CORRESPONDING POLYPEPTIDES
; TITLE OF INVENTION: ENCODED THERBY
; FILE REFERENCE: 2750-1579PUS2
; CURRENT APPLICATION NUMBER: US/10/953,349
; CURRENT FILING DATE: 2004-09-30
; NUMBER OF SEQ ID NOS: 40252
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 10528
; LENGTH: 232
; TYPE: PRT
; ORGANISM: Arabidopsis thaliana
US-10-953-349-10528

```

```

Query Match          8.5%; Score 108.5; DB 6; Length 232;
Best Local Similarity 23.9%; Pred. No. 0.03;
Matches 60; Conservative 36; Mismatches 94; Indels 61; Gaps 10;

```

```

Qy      17 YVNFLELRLVKLKPEGNSHGIPLLRKKADDPGKAFVL-----VALSNDNGQLAEIAIDV 70
      |::| | | : | | | | |:: | | : | |
Db      7 YLNFVQAEQDNKKKKKEKDPL---KPKHPVSAFLVYANERRAALREENKSVVEVA--- 60

Qy      71 TSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEKAY----- 122
      : | : : | | | | | | | : | | | : | |
Db      61 ---KITGEEWKNLS----DKKKAPYEKVAKKNKETYLQAMEEYKRTKEEALSQKKEEEE 113

Qy      123 -----RETDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEA 167
      : | | | : : | | : | | | | : | |
Db      114 LLKLHKQEALQMLKKKEKTDNLIKKEKATKKKKKNEN-VDPNKPKKPASSY----- 162

Qy      168 ARFTFIENQIRNNFQQRIRPANNTIS--LENKWGKLSFQIRT--SGANGMFSEAV--ELE 221
      | | :: : : : | | | : : | | : : : | | | |
Db      163.--FLFSKDERKKLTERPGTNNATVTALISLWKELSEEEKQVYNGKAAKLMEAYKKEVE 220

Qy      222 RANGKKYYVTA 232
      | | | :
Db      221 AYNKKSAAATS 231

```

```

RESULT 12
US-10-953-349-10527
; Sequence 10527, Application US/10953349
; Publication No. US20060107345A1
; GENERAL INFORMATION:
; APPLICANT: ALEXANDROV, Nickolai et al.
; TITLE OF INVENTION: SEQUENCE-DETERMINED DNA FRAGMENTS AND CORRESPONDING POLYPEPTIDES
; TITLE OF INVENTION: ENCODED THERBY
; FILE REFERENCE: 2750-1579PUS2
; CURRENT APPLICATION NUMBER: US/10/953,349
; CURRENT FILING DATE: 2004-09-30
; NUMBER OF SEQ ID NOS: 40252
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 10527
; LENGTH: 245
; TYPE: PRT
; ORGANISM: Arabidopsis thaliana
US-10-953-349-10527

```

```

Query Match          8.5%; Score 108.5; DB 6; Length 245;
Best Local Similarity 23.9%; Pred. No. 0.032;
Matches 60; Conservative 36; Mismatches 94; Indels 61; Gaps 10;

```

```

Qy      17 YVNFLELRLVKLKPEGNSHGIPLLRKKADDPGKAFVL-----VALSNDNGQLAEIAIDV 70
      |::| | | : | | | | |:: | | : | |
Db      20 YLNFVQAEQDNKKKKKEKDPL---KPKHPVSAFLVYANERRAALREENKSVVEVA--- 73

Qy      71 TSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEKAY----- 122
      : | : : | | | | | | | : | | | : | |
Db      74 ---KITGEEWKNLS----DKKKAPYEKVAKKNKETYLQAMEEYKRTKEEALSQKKEEEE 126

Qy      123 -----RETDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEA 167
      : | | | : : | | : | | | | : | |
Db      127 LLKLHKQEALQMLKKKEKTDNLIKKEKATKKKKKNEN-VDPNKPKKPASSY----- 175

Qy      168 ARFTFIENQIRNNFQQRIRPANNTIS--LENKWGKLSFQIRT--SGANGMFSEAV--ELE 221

```



```

      | | :: : : | | :: : | | :: : | | :: : | | :: : | | :: : | | :: :
Db      176 --FLFSKDERKKLTEERPGTNNATVTALISLKWKELSEEEKQVYNGKAAKLMEAYKKEVE 233

Qy      222 RANGKKYYVTA 232
      | | :: : : | | :: : | | :: : | | :: : | | :: : | | :: : | | :: :
Db      234 AYNKKSAAATS 244

```

RESULT 13

```

US-10-953-349-10526
; Sequence 10526, Application US/10953349
; Publication No. US20060107345A1
; GENERAL INFORMATION:
; APPLICANT: ALEXANDROV, Nickolai et al.
; TITLE OF INVENTION: SEQUENCE-DETERMINED DNA FRAGMENTS AND CORRESPONDING POLYPEPTIDES
; TITLE OF INVENTION: ENCODED THERBY
; FILE REFERENCE: 2750-1579PUS2
; CURRENT APPLICATION NUMBER: US/10/953,349
; CURRENT FILING DATE: 2004-09-30
; NUMBER OF SEQ ID NOS: 40252
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 10526
; LENGTH: 252
; TYPE: PRT
; ORGANISM: Arabidopsis thaliana
US-10-953-349-10526

```

```

Query Match      8.5%; Score 108.5; DB 6; Length 252;
Best Local Similarity 23.9%; Pred. No. 0.033;
Matches 60; Conservative 36; Mismatches 94; Indels 61; Gaps 10;

```

```

Qy      17 YVNFNLRLVRLKPEGNHSHGIPLLRKKADDPGKAFVL-----VALSNDNGQLAEIAIDV 70
      | | :: : : | | :: : | | :: : | | :: : | | :: : | | :: : | | :: :
Db      27 YLNFVQAEQDNKKKNKKEKDPL---KPKHPVSAFLVYANERRAALREENKSVVEVA--- 80

Qy      71 TSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEKAY----- 122
      : | : : | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      81 ---KITGEWKNLS---DKKKAPYEKVAKKNKETYLQAMEEYKRTKEEEALSQKKEEEE 133

Qy      123 -----RETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEA 167
      : | | | | : : | | : | | | | | | | | | | | | | | | | | | | | |
Db      134 LLKLHKQEALQMLKKKEKTDNLIKKEKATKKKKKNEN-VDPNPKPKPASSY----- 182

Qy      168 ARFTFIENQIRNRFQQRIRPANNTIS--LENKWGKLSFQIRT--SGANGMFSEAV--ELE 221
      | | :: : : : | | :: : | | :: : | | :: : | | :: : | | :: : | | :: :
Db      183 --FLFSKDERKKLTEERPGTNNATVTALISLKWKELSEEEKQVYNGKAAKLMEAYKKEVE 240

Qy      222 RANGKKYYVTA 232
      | | :: : : | | :: : | | :: : | | :: : | | :: : | | :: : | | :: :
Db      241 AYNKKSAAATS 251

```

RESULT 14

```

US-10-471-571A-5500
; Sequence 5500, Application US/10471571A
; Publication No. US20060115490A1
; GENERAL INFORMATION:
; APPLICANT: CHIRON SpA
; TITLE OF INVENTION: STAPHYLOCOCCUS AUREUS PROTEINS AND NUCLEIC ACIDS
; FILE REFERENCE: P026927WO
; CURRENT APPLICATION NUMBER: US/10/471,571A
; CURRENT FILING DATE: 2003-09-12
; PRIOR APPLICATION NUMBER: GB-0107661.1
; PRIOR FILING DATE: 2001-03-27
; NUMBER OF SEQ ID NOS: 5642
; SOFTWARE: SeqWin99, version 1.03
; SEQ ID NO 5500
; LENGTH: 876
; TYPE: PRT
; ORGANISM: Staphylococcus aureus
; FEATURE:
; NAME/KEY: MISC FEATURE
; LOCATION: (1)..(876)
; OTHER INFORMATION: DNA polymerase I
US-10-471-571A-5500

```

Query Match 7.4%; Score 95; DB 6; Length 876;
Best Local Similarity 20.0%; Pred. No. 2.9;
Matches 53; Conservative 41; Mismatches 103; Indels 68; Gaps 9;

```
Qy      37 IPLLKKADDPGKAFVLVALSNDNGQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYE 96
      | | :| | | | : : | | :| | :| | : : | |
Db      113 IGTLSKEADKAG--FQTIIITGDR-DLTQLATDNVTIYYTKKGVTVDVHYTPDFIAEKYN 169

Qy      97 GLFKNTI-----KTRLHFGGSYPSLEGEKAYRETTDLGIEPLR 134
      || | | | | | | | | | | : : : : | | : :
Db      170 GLTPNQIIDMKGLMGDTSDNIPGVAGVGKTAIKLLNQFDTVEGVYEHLD-----E 220

Qy     135 IGIKKLDENAIIDNYKPTEIASSLLVVIQMV-----EAARFTFIENQIRN-----NF 181
      | | | | : | | : | | | : | | | : | |
Db     221 ISGKKLKEK-LQNSKEDALMSKELATINVDSPIEVKLEDTLMTHQDEQQEKIELFKKLEF 279

Qy     182 QQRIRPANNTISLENKWGKLSFQIRTS-----GANGMFSEAVELER 222
      : | : : : | : | : | : | | | | : : : :
Db     280 KQLLADIDQSASVEDAIEK-TFEIETSF DNIDFTSLKEAAIHFE LDGGNYLRNNILKFSL 338

Qy     223 ANGKKYYVTAVDQVKPKIALLKFDV 247
      | : | | | : : | : : :
Db     339 FTGEKHIVINADDINNYVELVSWLE 363
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RESULT 15

US-10-449-902-41985

; Sequence 41985, Application US/10449902

; Publication No. US20060123505A1

; GENERAL INFORMATION:

; APPLICANT: National Institute of Agrobiological Sciences.

; APPLICANT: Bio-oriented Technology Research Advancement Institution.

; APPLICANT: The Institute of Physical and Chemical Research.

; APPLICANT: Foundation for Advancement of International Science.

; TITLE OF INVENTION: FULL-LENGTH PLANT cDNA AND USES THEREOF

; FILE REFERENCE: MOA-A0205Y1-US

; CURRENT APPLICATION NUMBER: US/10/449,902

; CURRENT FILING DATE: 2003-05-29

; PRIOR APPLICATION NUMBER: JP 2002-203269

; PRIOR FILING DATE: 2002-05-30

; PRIOR APPLICATION NUMBER: JP 2002-383870

; PRIOR FILING DATE: 2002-12-11

; NUMBER OF SEQ ID NOS: 56791

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 41985

; LENGTH: 296

; TYPE: PRT

; ORGANISM: Oryza sativa

US-10-449-902-41985

Query Match 7.0%; Score 89.5; DB 6; Length 296;
Best Local Similarity 23.6%; Pred. No. 2;
Matches 54; Conservative 37; Mismatches 107; Indels 31; Gaps 11;

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Qy      18 VNFLNEL---RVKLPPEGNS-----HGIPLLR--KKADDPGKAFVLVAL----SNDNGQL 63
      | : | | | | : | : | | | | : | | : | | : |
Db      42 VHSWNELISNRLKAELADNPCRQIEIGIPTMAGLHGDDEPPAKWITVRLFGGGDRDDQ- 100

Qy      64 AEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEKAYR 123
      | : : : | | : | : : | | | | | | | | |
Db     101 AKLLVAEDDAYVAGFANRT-GHWHTFRGGRCYPAL-PATACTELPFGGSYRDLIGGVANL 158

Qy     124 ETDLGIEPLRIGIKKLDENAIIDNYKP-----TEIASSLLVVIQMVSEARFTFIENQI 177
      : | : | : : : | | : : | : | : | : |
Db     159 RAVPVG-RSSAVGAMEV----LSRYDPAATTAADAKMALAKFMVMVTEAARLKPVRRAV 213

Qy     178 RNNFQQRIRPANNTISLENKWGKLSFQI---RTSGANGMFSEAVELERA 223
      : : | : : : : | : | : | : | : |
Db     214 VERWEQVSYLSSDEVDPVYYGKMSLMILEWKRTGRWGELGPWANIDRA 262
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Search completed: July 20, 2006, 09:41:18
Job time : 14.8192 secs

SCORE Search Results Details for Application 10717243 and Search Result us-10-717-243-101.rup.

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OM protein - protein search, using sw model

Run on: July 20, 2006, 09:36:29 ; Search time 257.947 Seconds
 (without alignments)
 900.105 Million cell updates/sec

Title: US-10-717-243-101
 Perfect score: 1277
 Sequence: 1 GLDTVSFSTKGATYITYVNF.....AVDQVKPKIALLKFDKDPK 251

Scoring table: BLOSUM62
 Gapop 10.0 , Gapext 0.5

Searched: 2849598 seqs, 925015592 residues

Total number of hits satisfying chosen parameters: 2849598

Minimum DB seq length: 0
 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
 Maximum Match 100%
 Listing first 45 summaries

Database : UniProt_7.2:*
 1: uniprot_sprot:*
 2: uniprot_trembl:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Match	Query Length	DB ID	Description
1	1269	99.4	316	1 RIPG_GELMU	P33186 gelonium mu
2	1235.5	96.8	258	2 Q9S9E4_GELMU	Q9s9e4 gelonium mu
3	398.5	31.2	581	2 Q94BW5_CINCA	Q94bw5 cinnamomum
4	397.5	31.1	580	2 Q94BW3_CINCA	Q94bw3 cinnamomum
5	396.5	31.0	549	2 Q9FV22_CINCA	Q9fv22 cinnamomum
6	391	30.6	299	2 Q8GZN9_9ROSI	Q8gzn9 euphorbia s
7	390.5	30.6	580	2 Q94BW4_CINCA	Q94bw4 cinnamomum
8	365.5	28.6	563	2 Q8GT32_SAMNI	Q8gt32 sambucus ni
9	359.5	28.2	297	2 Q8GZP0_9ROSI	Q8gzp0 euphorbia s
10	356	27.9	563	1 NIGB_SAMNI	P33183 sambucus ni
11	356	27.9	563	2 Q945S2_SAMNI	Q945s2 sambucus ni
12	352.5	27.6	563	2 O04367_SAMNI	O04367 sambucus ni
13	348	27.3	264	2 Q684J5_MOMCH	Q684j5 momordica c
14	348	27.3	286	1 RIP2_MOMBA	P29339 momordica b
15	348	27.3	286	1 RIP3_MOMCH	P24817 momordica c

16	348	27.3	286	2	Q5PZ05_MOMCH	Q5pz05 momordica c
17	347	27.2	541	2	Q41174_RICCO	Q41174 ricinus com
18	346	27.1	576	1	RICI_RICCO	P02879 ricinus com
19	343.5	26.9	265	1	RIP2_PHYDI	P34967 phytolacca
20	341.5	26.7	294	1	RIP1_TRIAN	P56626 trichosanth
21	341.5	26.7	564	2	Q9AVR2_9DIPS	Q9avr2 sambucus eb
22	337.5	26.4	564	1	AGGL_RICCO	P06750 ricinus com
23	337	26.4	282	1	RIP2_BRYDI	P98184 bryonia dio
24	334.5	26.2	527	1	ABRB_ABRPR	Q06077 abrus preca
25	332.5	26.0	294	1	RIPA_PHYAM	Q03464 phytolacca
26	330.5	25.9	293	2	Q8VYU0_9ROSI	Q8vyu0 jatropa cu
27	330	25.8	252	2	Q38760_ABRPR	Q38760 abrus preca
28	329.5	25.8	294	2	Q8H1W1_PHYAM	Q8h1w1 phytolacca
29	328.5	25.7	275	2	Q84LJ1_GYNPE	Q84lj1 gynostemma
30	327.5	25.6	277	2	Q84JR1_GYNPE	Q84jr1 gynostemma
31	327	25.6	313	1	RIP1_PHYAM	P10297 phytolacca
32	327	25.6	313	2	Q53YN2_PHYAM	Q53yn2 phytolacca
33	327	25.6	313	2	Q6PWU4_PHYAM	Q6pwu4 phytolacca
34	326.5	25.6	277	2	Q8GV09_GYNPE	Q8gv09 gynostemma
35	326	25.5	289	2	Q41216_TRIKI	Q41216 trichosanth
36	325.5	25.5	275	2	Q8H1Y4_GYNPE	Q8hly4 gynostemma
37	325.5	25.5	293	2	Q8S452_9ROSI	Q8s452 jatropa cu
38	325.5	25.5	298	2	Q5F0I3_GYNPE	Q5f0i3 gynostemma
39	325	25.5	567	2	Q6H267_VISAL	Q6h267 viscum albu
40	323.5	25.3	277	2	Q8GV11_GYNPE	Q8gv11 gynostemma
41	323	25.3	289	1	RIP1_TRIKI	P09989 trichosanth
42	323	25.3	289	2	Q94KE4_TRIKI	Q94ke4 trichosanth
43	322	25.2	289	2	Q84SV8_TRIKI	Q84sv8 trichosanth
44	321.5	25.2	565	2	O04071_SAMNI	O04071 sambucus ni
45	321	25.1	251	2	Q7DM12_ABRPR	Q7dm12 abrus preca

ALIGNMENTS

RESULT 1

RIPG_GELMU

ID RIPG_GELMU STANDARD; PRT; 316 AA.
AC P33186;
DT 01-OCT-1993, integrated into UniProtKB/Swiss-Prot.
DT 01-NOV-1995, sequence version 2.
DT 07-FEB-2006, entry version 44.
DE Ribosome-inactivating protein gelonin precursor (EC 3.2.2.22) (rRNA N-glycosidase).
DE glycosidase).
GN Name=GEL;
OS Gelonium multiflorum (Euphorbiaceae himalaya).
OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC Spermatophyta; Magnoliophyta; eudicotyledons; core eudicotyledons;
OC rosids; eurosids I; Malpighiales; Euphorbiaceae; Crotonoideae;
OC Gelonieae; Gelonium.
OX NCBI_TaxID=3979;
RN [1]
RP NUCLEOTIDE SEQUENCE [MRNA].
RX MEDLINE=94085781; PubMed=7916721; DOI=10.1016/0378-1119(93)90097-M;
RA Nolan P.A., Garrison D.A., Better M.;
RT "Cloning and expression of a gene encoding gelonin, a ribosome-inactivating protein from Gelonium multiflorum.";
RL Gene 134:223-227(1993).
RN [2]
RF PROTEIN SEQUENCE OF 47-93.
RC TISSUE=Seed;
RX MEDLINE=89326691; PubMed=2753596;
RA Montecucchi P.-C., Lazzarini A.M., Barbieri L., Stirpe F., Soria M.,
RA Lappi D.;
RT "N-terminal sequence of some ribosome-inactivating proteins.";
RL Int. J. Pept. Protein Res. 33:263-267(1989).
RN [3]
RP X-RAY CRYSTALLOGRAPHY (1.8 ANGSTROMS).
RX MEDLINE=95333189; PubMed=7608981;
RA Hosur M.V., Nair B., Satyamurthy P., Misquith S., Surolia A.,
RA Kannan K.K.;
RT "X-ray structure of gelonin at 1.8-A resolution.";
RL J. Mol. Biol. 250:368-380(1995).
CC -!- CATALYTIC ACTIVITY: Endohydrolysis of the N-glycosidic bond at one
CC specific adenosine on the 28S rRNA.
CC -!- SUBUNIT: Homodimer.

CC -!- SIMILARITY: Belongs to the ribosome-inactivating protein family.
CC Type 1 RIP subfamily.
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CC -----
DR EMBL; L12243; AAA16312.1; -; mRNA.
DR PIR; JT0753; JT0753.
DR HSSP; P09989; 1MRJ.
DR InterPro; IPR001574; RIP.
DR Pfam; PF00161; RIP; 1.
DR PRINTS; PRO0396; SHIGARICIN.
DR PROSITE; PS00275; SHIGA_RICIN; 1.
KW Direct protein sequencing; Glycoprotein; Hydrolase; Plant defense;
KW Protein synthesis inhibitor; Signal; Toxin.
FT SIGNAL 1 26 Potential.
FT PROPEP 27 46
FT /FTId=PRO_0000030786.
FT CHAIN 47 297 Ribosome-inactivating protein gelonin.
FT /FTId=PRO_0000030787.
FT PROPEP 298 316 Removed in mature form.
FT /FTId=PRO_0000030788.
FT ACT_SITE 212 212
FT CARBOHYD 235 235 N-linked (GlcNAc. . .).
FT DISULFID 90 96
FT CONFLICT 90 90 C -> K (in Ref. 2).
FT CONFLICT 93 93 P -> D (in Ref. 2).
SQ SEQUENCE 316 AA; 35419 MW; 1252F3E710901B85 CRC64;

Query Match 99.4%; Score 1269; DB 1; Length 316;
Best Local Similarity 99.2%; Pred. No. 2.8e-98;
Matches 249; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1 GLDTSVSFSTKGATYITYVNFLELRVKLKPEGNHSHGIPLLRKKADDPGKAFVLVALSNDN 60
|||||
Db 47 GLDTSVSFSTKGATYITYVNFLELRVKLKPEGNHSHGIPLLRKKCDDPGKCFVLVALSNDN 106
Qy 61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
|||||
Db 107 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 166
Qy 121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
|||||
Db 167 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 226
Qy 181 FQQRIRPANNTISLENKWGKLSFQIRTSANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
|||||
Db 227 FQQRIRPANNTISLENKWGKLSFQIRTSANGMFSEAVELERANGKKYYVTAVDQVKPKI 286
Qy 241 ALLKFVDKDPK 251
|||||
Db 287 ALLKFVDKDPK 297

RESULT 2

Q9S9E4_GELMU

ID Q9S9E4_GELMU PRELIMINARY; PRT; 258 AA.
AC Q9S9E4;
DT 01-MAY-2000, integrated into UniProtKB/TrEMBL.
DT 01-MAY-2000, sequence version 1.
DT 07-FEB-2006, entry version 21.
DE rRNA -glycosidase (EC 3.2.2.22) (rRNA N-glycosidase).
OS Gelonium multiflorum (Euphorbiaceae himalaya).
OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC Spermatophyta; Magnoliophyta; eudicotyledons; core eudicotyledons;
OC rosids; eurosids I; Malpighiales; Euphorbiaceae; Crotonoideae;
OC Geloniae; Gelonium.
OX NCBI_TaxID=3979;
RN [1]
RP PROTEIN SEQUENCE.
RX MEDLINE=96006751; PubMed=7553224;
RA Rosenblum M.G., Kohr W.A., Beattie K.L., Beattie W.G., Marks W.,
RA Toman P.D., Cheung L.;
RT "Amino acid sequence analysis, gene construction, cloning, and
RT expression of gelonin, a toxin derived from Gelonium multiflorum."
RL J. Interferon Cytokine Res. 15:547-555(1995).

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CC -----
DR HSSP; P09989; 1MRJ.
DR GO; GO:0016787; F:hydrolase activity; IEA.
DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
DR GO; GO:0006952; P:defense response; IEA.
DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
DR GO; GO:0009405; P:pathogenesis; IEA.
DR InterPro; IPR001574; RIP.
DR Pfam; PF00161; RIP; 1.
DR PRINTS; PR00396; SHIGARICIN.
DR PROSITE; PS00275; SHIGA_RICIN; 1.
KW Hydrolase; Plant defense; Protein synthesis inhibitor; Toxin.
SQ SEQUENCE 258 AA; 28826 MW; 13D68E673F4D6B06 CRC64;

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Query Match          96.8%; Score 1235.5; DB 2; Length 258;
Best Local Similarity 95.4%; Pred. No. 1.4e-95;
Matches 247; Conservative 1; Mismatches 2; Indels 9; Gaps 2;

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Qy      1 GLDTSVSFSTKGATYITYVNFNLRLRVKLPKPEGNHGIPLLRKKADDPGKAFVLVALSNDN 60
         |||
Db      1 GLDTSVSFSTKGATYITYVNFNLRLRVKLPKPEGNHGIPLLR-KGDDPGKCFVLVALSNDN 59

Qy      61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTI-----KTRLHFHFGGS 112
         |||
Db      60 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKNPLLFGGKTRLHFHFGGS 119

Qy      113 YPSLEGEKAYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTF 172
         |||
Db      120 YPSLEGEKAYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTF 179

Qy      173 IENQIRNNFQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKYYVTA 232
         |||
Db      180 IENQIRNNFQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKYYVTA 239

Qy      233 VDQVKPKIALLLKFVDKDPK 251
         |||
Db      240 VDQVKPKIALLLKFVDKDPE 258

```

```

RESULT 3
Q94BW5_CINCA
ID Q94BW5_CINCA PRELIMINARY; PRT; 581 AA.
AC Q94BW5;
DT 01-DEC-2001, integrated into UniProtKB/TrEMBL.
DT 01-DEC-2001, sequence version 1.
DT 07-FEB-2006, entry version 18.
DE Type 2 ribosome-inactivating protein cinnamomin I precursor.
OS Cinnamomum camphora (Camphor tree).
OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC Spermatophyta; Magnoliophyta; magnoliids; Laurales; Lauraceae;
OC Cinnamomum.
OX NCBI_TaxID=13429;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=21888636; PubMed=11891062; DOI=10.1016/S0378-1119(01)00890-3;
RA Yang Q., Liu R.S., Gong Z.Z., Liu W.Y.;
RT "Studies of three genes encoding Cinnamomin (a type II RIP) isolated
RT from the seeds of camphor tree and their expression patterns.";
RL Gene 284:215-223(2002).

```

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CC -----
DR EMBL; AY039801; AAK82458.1; -; Genomic_DNA.
DR HSSP; P02879; 2AAI.
DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
DR InterPro; IPR000772; Ricin_B_lectin.
DR InterPro; IPR001574; RIP.
DR Pfam; PF00652; Ricin_B_lectin; 2.
DR Pfam; PF00161; RIP; 1.
DR PRINTS; PR00396; SHIGARICIN.
DR SMART; SM00458; RICIN; 2.

```

DR PROSITE; PS50231; RICIN_B_LLECTIN; 2.
 KW Signal.
 FT SIGNAL 1 32 Potential.
 FT CHAIN 33 581 type 2 ribosome-inactivating protein
 FT cinnamomin I.
 SQ SEQUENCE 581 AA; 64216 MW; 6E8F5FB8FBA3D196 CRC64;

Query Match 31.2%; Score 398.5; DB 2; Length 581;
 Best Local Similarity 39.7%; Pred. No. 1.2e-24;
 Matches 100; Conservative 46; Mismatches 93; Indels 13; Gaps 8;

Qy 4 TVSFSTKGATYITYVNFNLRLVKLKEGNSHGIPLLRKKADDP-GKAFVLVALSN---D 59
 Db 35 TVTFTTKNATKTSYTFQIEALRAQLASGEEPHGIPVMRERSTVPDSKRFILVELSNWAAD 94
 Qy 60 NGQLAEIAIDVTSVYVVGQVRNRSYFFK-DAPDAAYEGLFKNTIKTRLHFGGSYPSLEG 118
 Db 95 SP--VTLAVDVTNAYVVAYRTGSQSFFLREDNPDPAIENLLPDTKRYTFPFSGSYTDLEG 152
 Qy 119 EKA-YRETTDLGIEPLRIGIKKLDENAIDNYKPTIEASSLLVVIQMVSEARFTFIENQI 177
 Db 153 VAGERREEILGMDPLENAISALWISNLNQQR--ALARSLIVVIQMVAEAVRFRFIEYRV 210
 Qy 178 RNNFQ--QRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAEVLERANGKYYVTAV-D 234
 Db 211 RGSISRAMEFRPDPAMLSLENKWSALSNAVQSNQGGVFSSPVELRSISNKPVYVGSVSD 270
 Qy 235 QVKPKIALLLKFV 246
 Db 271 RVISGLAIMLFI 282

RESULT 4

Q94BW3_CINCA

ID Q94BW3_CINCA PRELIMINARY; PRT; 580 AA.
 AC Q94BW3;
 DT 01-DEC-2001, integrated into UniProtKB/TrEMBL.
 DT 01-DEC-2001, sequence version 1.
 DT 07-FEB-2006, entry version 18.
 DE Type 2 ribosome-inactivating protein cinnamomin III precursor.
 OS Cinnamomum camphora (Camphor tree).
 OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
 OC Spermatophyta; Magnoliophyta; magnoliids; Laurales; Lauraceae;
 OC Cinnamomum.
 OX NCBI_TaxID=13429;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RX MEDLINE=21888636; PubMed=11891062; DOI=10.1016/S0378-1119(01)00890-3;
 RA Yang Q., Liu R.S., Gong Z.Z., Liu W.Y.;
 RT "Studies of three genes encoding Cinnamomin (a type II RIP) isolated
 RT from the seeds of camphor tree and their expression patterns."
 RL Gene 284:215-223(2002).

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DR EMBL; AY039803; AAK82460.1; -; Genomic_DNA.
 DR HSSP; P02879; 2AAI.
 DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
 DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
 DR InterPro; IPR000772; Ricin_B_lectin.
 DR InterPro; IPR001574; RIP.
 DR Pfam; PF00652; Ricin_B_lectin; 2.
 DR Pfam; PF00161; RIP; 1.
 DR PRINTS; PR00396; SHIGARICIN.
 DR SMART; SM00458; RICIN; 2.
 DR PROSITE; PS50231; RICIN_B_LLECTIN; 2.
 KW Signal.
 FT SIGNAL 1 32 Potential.
 FT CHAIN 33 580 type 2 ribosome-inactivating protein
 FT cinnamomin III.
 SQ SEQUENCE 580 AA; 64422 MW; 940D10F01E7FB558 CRC64;

Query Match 31.1%; Score 397.5; DB 2; Length 580;
 Best Local Similarity 39.8%; Pred. No. 1.5e-24;
 Matches 101; Conservative 47; Mismatches 89; Indels 17; Gaps 9;


```

Qy      4 TVSFSTKGATYITYVNFNLRLVRLKPEGNHSHGIPLLRKKADDP-GKAFVLVALSN---D 59
Db      35 TVTFTTKNATKTSYQFIEALRAQLASGEEPHGIPVMRERSTVPDSKRFLVELSNWAAD 94

Qy      60 NGQLAEIAIDVTSVYVVGQVVRNRSYFFK-DAPDAAYEGLFKNTIKTRLHFGGSYPSLE- 117
Db      95 SP--VTLAVDVTNAYVVAYRTGSQSFFLRDNPDPAIENLLPDTKRYTFPFGSGSYTDLER 152

Qy      118 --GEKAYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIEN 175
Db      153 VAGER--REEILLGMDPLENAISALWISNLNQQR--ALARSLIVVIQMVAEAVRFRFIEY 208

Qy      176 QIRNRF--QQRIRPANNTISLENKWKLSFQIRTSANGMFSEAVELERANGKKYYVTAV 233
Db      209 RVRESITRAEMFRPDPAMLSLENKWSALSNAVQQSNQGGVFSSPVELRSISNKPVYVGSV 268

Qy      234 -DQVKPKIALLLKFV 246
Db      269 SDRVISGLAIMLFI 282

```

RESULT 5

Q9FV22_CINCA

```

ID   Q9FV22_CINCA   PRELIMINARY;   PRT;   549 AA.
AC   Q9FV22;
DT   01-MAR-2001, integrated into UniProtKB/TrEMBL.
DT   01-MAR-2001, sequence version 1.
DT   07-FEB-2006, entry version 19.
DE   Type II ribosome-inactivating protein cinnamomin (Fragment).
OS   Cinnamomum camphora (Camphor tree).
OC   Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC   Spermatophyta; Magnoliophyta; magnoliids; Laurales; Lauraceae;
OC   Cinnamomum.
OX   NCBI_TaxID=13429;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RA   Xie L., Liu W.-Y., Wang E.-D.;
RL   Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases.
CC   -----
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CC   -----
DR   EMBL; AF259548; AAF68978.2; -; mRNA.
DR   HSSP; P02879; 2AAI.
DR   GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
DR   GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
DR   InterPro; IPR000772; Ricin_B_lectin.
DR   InterPro; IPR001574; RIP.
DR   Pfam; PF00652; Ricin_B_lectin; 2.
DR   Pfam; PF00161; RIP; 1.
DR   PRINTS; PR00396; SHIGARICIN.
DR   SMART; SM00458; RICIN; 2.
DR   PROSITE; PS50231; RICIN_B_LECTIN; 2.
FT   NON_TER      1      1
SQ   SEQUENCE      549 AA;  60649 MW;  02607FE607CA44B0 CRC64;

```

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Query Match      31.0%;   Score 396.5;   DB 2;   Length 549;
Best Local Similarity  39.7%;   Pred. No. 1.7e-24;
Matches 100;   Conservative  46;   Mismatches  93;   Indels  13;   Gaps  8;

```

```

Qy      4 TVSFSTKGATYITYVNFNLRLVRLKPEGNHSHGIPLLRKKADDP-GKAFVLVALSN---D 59
Db      3 TVTFTTKNATKTSYQFIEALRAQLASGEEPHGIPVMRERSTVPDSKRFLVELSNWAAD 62

Qy      60 NGQLAEIAIDVTSVYVVGQVVRNRSYFFK-DAPDAAYEGLFKNTIKTRLHFGGSYPSLEG 118
Db      63 SP--VTLAVDVTNAYVVAYRTGSQSFFLRDNPDPAIENLLPDTKRYTFPFGSGSYTDLEG 120

Qy      119 EKA-YRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQI 177
Db      121 VAGERREEILLGMDPLENAISALWISNLNQQR--ALARSLIVVIQMVAEAVRFRFIEYRV 178

Qy      178 RNNFQ--QQRIRPANNTISLENKWKLSFQIRTSANGMFSEAVELERANGKKYYVTAV-D 234
Db      179 RGSISRAEMFRPDPAMLSLENKWSALSNAVQQSNQGGVFSSPVELRSISNKPVYVGSVSD 238

```

RESULT 6

Query Match 30.6%; Score 391; DB 2; Length 299;
Best Local Similarity 41.3%; Pred. No. 2.2e-24;
Matches 102; Conservative 36; Mismatches 97; Indels 12; Gaps 5;

RESULT 7

Q94BW4_CINCA
ID Q94BW4_CINCA PRELIMINARY; PRT; 580 AA.
AC Q94BW4;
DT 01-DEC-2001, integrated into UniProtKB/TrEMBL.
DT 01-DEC-2001, sequence version 1.
DT 07-FEB-2006, entry version 18.
DE Type 2 ribosome-inactivating protein cinnamomin II precursor.
OS Cinnamomum camphora (Camphor tree).
OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC Spermatophyta; Magnoliophyta; magnoliids; Laurales; Lauraceae;
OC Cinnamomum.
OX NCBI_TaxID=13429;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=21888636; PubMed=11891062; DOI=10.1016/S0378-1119(01)00890-3;
RA Yang Q., Liu R.S., Gong Z.Z., Liu W.Y.;
RT "Studies of three genes encoding Cinnamomin (a type II RIP) isolated
RT from the seeds of camphor tree and their expression patterns.";
RL Gene 284:215-223(2002).
CC -----
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CC -----
DR EMBL; AY039802; AAK82459.1; -; Genomic_DNA.
DR HSSP; P02879; 2AAI.
DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
DR InterPro; IPR000772; Ricin_B_lectin.
DR InterPro; IPR001574; RIP.
DR Pfam; PF00652; Ricin_B_lectin; 2.
DR Pfam; PF00161; RIP; 1.
DR PRINTS; PR00396; SHIGARICIN.
DR SMART; SM00458; RICIN; 2.
DR PROSITE; PS50231; RICIN_B_LECTIN; 2.
KW Signal.
FT SIGNAL 1 32 Potential.
FT CHAIN 33 580 type 2 ribosome-inactivating protein
FT cinnamomin II.
SQ SEQUENCE 580 AA; 64266 MW; 37E4289ECCE0CBFF CRC64;

Query Match 30.6%; Score 390.5; DB 2; Length 580;
Best Local Similarity 39.8%; Pred. No. 5.8e-24;
Matches 101; Conservative 44; Mismatches 92; Indels 17; Gaps 9;

Qy 4 TVSFSTKGATYITYVNFNLRLVKLKPEGNHSHGIPLLRKKADDP-GKAFVLVALSN---D 59
Db 35 TVTFTTKNATKTSYQFIEALRAQLASGEEPHGIPVMRDGSTVPDSKRFLVELSNWAAD 94

Qy 60 NGQLAEIAIDVTSVYVVGQVVRNRSYFFK-DAPDAAYEGLFKNTIKTRLHFHGGSYPSLE- 117
Db 95 SP--VALAVDVTNAYVVAYRTGSQSFFLREDNPDPAIENLLPDTKRYTFPFGSYTDLER 152

Qy 118 --GEKAYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIEN 175
Db 153 VAGE--LREEILLGMDPLENAISALWTSNLNQQR--ALARSLIVVIQMVAEAVRFRFIEY 208

Qy 176 QIRNNF--QQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAV 233
Db 209 RVRESITRAEMFRPDPAMLSLENKWSALSNAVQQSNQGGVFSSPVELRSISNKPVYVGSV 268

Qy 234 -DQVKPKIALLKVF 246
Db 269 SDRVISGLAIMLFI 282

RESULT 8

Q8GT32_SAMNI
ID Q8GT32_SAMNI PRELIMINARY; PRT; 563 AA.
AC Q8GT32;
DT 01-MAR-2003, integrated into UniProtKB/TrEMBL.
DT 01-MAR-2003, sequence version 1.
DT 07-FEB-2006, entry version 13.
DE Type 2 ribosome-inactivating protein Nigrin 1 (EC 3.2.2.22).
OS Sambucus nigra (European elder).
OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC Spermatophyta; Magnoliophyta; eudicotyledons; core eudicotyledons;

DR HSSP; P33185; 1BRY.
DR GO; GO:0016798; F:hydrolase activity, acting on glycosyl bonds; IEA.
DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
DR GO; GO:0005975; P:carbohydrate metabolism; IEA.
DR GO; GO:0006952; P:defense response; IEA.
DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
DR GO; GO:0009405; P:pathogenesis; IEA.
DR InterPro; IPR001574; RIP.
DR Pfam; PF00161; RIP; 1.
DR PRINTS; PR00396; SHIGARICIN.
DR PROSITE; PS00275; SHIGA_RICIN; 1.
KW Glycosidase; Hydrolase; Plant defense; Protein synthesis inhibitor;
KW Signal; Toxin.
FT SIGNAL 1 22 Potential.
FT CHAIN 23 297 ribosome inactivating protein Euserratin
FT 1.
SQ SEQUENCE 297 AA; 33146 MW; A5269E1DDB91287A CRC64;

Query Match 28.2%; Score 359.5; DB 2; Length 297;
Best Local Similarity 39.8%; Pred. No. 9.9e-22;
Matches 98; Conservative 40; Mismatches 97; Indels 11; Gaps 7;

Qy 4 TVSFSTKGATYITYVNFNLNLRVCLKPEGNHGIPLLRKKAD--DPGKAFVLVALSN-DN 60
| | | | | : | : | | | : | | | | | : | | : | | | |
Db 29 TVKFTTHLASVGSYQTLMSALRVNLESKLESHNIPLLRKPSDITDQNK-YLLVELTNYDT 87

Qy 61 GQLAEIAIDVTSVYVVGQVRNRSYFFKADPAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
: | : | : | | : | : | | | | | | | | | | | : | : | : | : | :
Db 88 KRTVTILALTVLNVYVIGYKSGTKSFFLKADAPSDAKTLLFTDTTPKTLEVDTNYNL-GD- 145

Qy 121 AYRETTDLGIEPLRIGIKKLDENAIIDNYK-PTEIASSLLVVIQMVSEAAARFTFIENQIRN 179
| | | | | : | | | | : | : | | | | | | | | | | | : | : | : | :
Db 146 --RSKVGLGIPALKNAINIL--NQFDGVSTDQDFKHSLLVVIQMVSEAAARFKFIQLKIEG 201

Qy 180 NFQQRIRPANNTISLENKWKLSFQIRTSANGMFSEAVELEERANGKYYVTAVDQVKPK 239
: | : | | : | | | | : : | | | | : | : | : | : | : | : | : | :
Db 202 GLLTQYLPKPDITISYQNNWSALSQSIQLADANGRLSESVTLKYEDGKDRVFMVEQVQRD 261

Qy 240 IALLKF 245
| : | : | :
Db 262 ISLLLY 267

RESULT 10

NIGB_SAMNI

ID NIGB_SAMNI STANDARD; PRT; 563 AA.
AC P33183; P33184; P93542;
DT 01-OCT-1993, integrated into UniProtKB/Swiss-Prot.
DT 05-DEC-2001, sequence version 2.
DT 07-FEB-2006, entry version 56.
DE Nigrin b precursor (Agglutinin V) (SNAV) [Contains: Nigrin b A chain
DE (EC 3.2.2.22) (rRNA N-glycosidase); Nigrin b B chain].
OS Sambucus nigra (European elder).
OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC Spermatophyta; Magnoliophyta; eudicotyledons; core eudicotyledons;
OC asterids; campanulids; Dipsacales; Adoxaceae; Sambucus.
OX NCBI_TaxID=4202;
RN [1]
RP NUCLEOTIDE SEQUENCE [MRNA].
RC TISSUE=Bark;
RX MEDLINE=96215449; PubMed=8647092;
RA Van Damme E.J., Barre A., Rouge P., Van Leuven F., Peumans W.J.;
RT "Characterization and molecular cloning of Sambucus nigra agglutinin V
RT (nigrin b), a GalNAc-specific type-2 ribosome-inactivating protein
RT from the bark of elderberry (Sambucus nigra).";
RL Eur. J. Biochem. 237:505-513(1996).
RN [2]
RP PROTEIN SEQUENCE OF 26-49 AND 298-321.
RC TISSUE=Bark;
RX MEDLINE=94003077; PubMed=8400135;
RA Girbes T., Citores L., Ferreras J.M., Rojo M.A., Iglesias R.,
RA Munoz R., Arias F.J., Calonge M., Garcia J.R., Mendez E.;
RT "Isolation and partial characterization of nigrin b, a non-toxic novel
RT type 2 ribosome-inactivating protein from the bark of Sambucus nigra
RT L.";
RL Plant Mol. Biol. 22:1181-1186(1993).

Qy 175 NQIRNNFQQ--RIRPANNTISLENKWGKLSFQIRTSGAN 211
 Db 197 QEVRRSLQQATSFTPNALMLSMENNWSSMSLEIQQAGNN 235

RESULT 11

Q945S2_SAMNI

ID Q945S2_SAMNI PRELIMINARY; PRT; 563 AA.
 AC Q945S2;
 DT 01-DEC-2001, integrated into UniProtKB/TrEMBL.
 DT 01-DEC-2001, sequence version 1.
 DT 07-FEB-2006, entry version 18.
 DE Ribosome-inactivating protein.
 GN Name=AV1;
 OS Sambucus nigra (European elder).
 OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
 OC Spermatophyta; Magnoliophyta; eudicotyledons; core eudicotyledons;
 OC asterids; campanulids; Dipsacales; Adoxaceae; Sambucus.
 OX NCBI_TaxID=4202;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RC TISSUE=Leaf;
 RA Van Damme E.J.M.;
 RL Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
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 CC -----
 DR EMBL; AF409135; AAL04123.1; -; mRNA.
 DR HSSP; Q9AVR2; 1HWM.
 DR SMR; Q945S2; 26-274, 299-560.
 DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
 DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
 DR InterPro; IPR000772; Ricin_B_lectin.
 DR InterPro; IPR001574; RIP.
 DR Pfam; PF00652; Ricin_B_lectin; 2.
 DR Pfam; PF00161; RIP; 1.
 DR PRINTS; PR00396; SHIGARICIN.
 DR SMART; SM00458; RICIN; 2.
 DR PROSITE; PS50231; RICIN_B_LLECTIN; 2.
 DR PROSITE; PS00275; SHIGA_RICIN; 1.
 SQ SEQUENCE 563 AA; 62242 MW; 07F7CBEDCF33BF10 CRC64;

Query Match 27.9%; Score 356; DB 2; Length 563;
 Best Local Similarity 41.1%; Pred. No. 4.5e-21;
 Matches 90; Conservative 36; Mismatches 77; Indels 16; Gaps 7;

Qy 1 GLD--TVSFSTKGATYITYVNFNLRLVCLKPEG--NSHGIPLLRKKADDPGKA-FVLVA 55
 Db 25 GIDYPSVSFNLGAKSATYRDFLSNLR-KTVATGTYEVNGLPVLRRRESEVQVKSRLFVLP 83

Qy 56 LSNNDGQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFEGGSYPS 115
 Db 84 LTNYNGNTVTLAVDVTNLYVVAESGNANSYFFKDATEVQKSNLFGTKQNTLSFTGNYDN 143

Qy 116 LE-GEKAYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIEIASSLLVVIQMVSEARFTFIE 174
 Db 144 LETAANTRRRESIELGPSPLDGAITSL-----YHGDSVARSLVVIQMVSEARFRYIE 196

Qy 175 NQIRNNFQQ--RIRPANNTISLENKWGKLSFQIRTSGAN 211
 Db 197 QEVRRSLQQATSFTPNALMLSMENNWSSMSLEIQQAGNN 235

RESULT 12

O04367_SAMNI

ID O04367_SAMNI PRELIMINARY; PRT; 563 AA.
 AC O04367;
 DT 01-JUL-1997, integrated into UniProtKB/TrEMBL.
 DT 01-JUL-1997, sequence version 1.
 DT 07-FEB-2006, entry version 33.
 DE Ribosome inactivating protein precursor.
 OS Sambucus nigra (European elder).
 OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
 OC Spermatophyta; Magnoliophyta; eudicotyledons; core eudicotyledons;

OC asterids; campanulids; Dipsacales; Adoxaceae; Sambucus.
 OX NCBI_TaxID=4202;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RX MEDLINE=98112023; PubMed=9450339;
 RA Van Damme E.J., Roy S., Barre A., Rouge P., Van Leuven F.,
 RA Peumans W.J.;
 RT "The major elderberry (*Sambucus nigra*) fruit protein is a lectin
 RT derived from a truncated type 2 ribosome-inactivating protein.";
 RL Plant J. 12:1251-1260(1997).
 CC -----
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 CC -----
 DR EMBL; U76524; AAC15886.1; -; mRNA.
 DR HSSP; Q9AVR2; 1HWM.
 DR SMR; O04367; 26-276, 299-560.
 DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
 DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
 DR InterPro; IPR000772; Ricin_B_lectin.
 DR InterPro; IPR001574; RIP.
 DR Pfam; PF00652; Ricin_B_lectin; 2.
 DR Pfam; PF00161; RIP; 1.
 DR PRINTS; PR00396; SHIGARICIN.
 DR SMART; SM00458; RICIN; 2.
 DR PROSITE; PS50231; RICIN_B_LECTIN; 2.
 DR PROSITE; PS00275; SHIGA_RICIN; 1.
 KW Signal.
 FT SIGNAL 1 25 Potential.
 FT CHAIN 26 297 ribosome inactivating protein, A chain.
 FT CHAIN 298 563 ribosome inactivating protein, B chain.
 SQ SEQUENCE 563 AA; 62337 MW; 3ED2B6C08E796205 CRC64;

 Query Match 27.6%; Score 352.5; DB 2; Length 563;
 Best Local Similarity 39.7%; Pred. No. 8.9e-21;
 Matches 91; Conservative 37; Mismatches 86; Indels 15; Gaps 7;

Qy 1 GLD--TVSFSTKGATYITYVNFNLNLR-VKLKPEGNSHGIPLLRKKADDPGK-AFVLVAL 56
 Db 25 GIDYPSVSFNLAKSATYRDFLKNLRTIVATGTYEVNGLPVLRRSEVQVKNRFVLVLL 84

 Qy 57 SNDNGQLAEIAIDVTSVYVVGQVVRNRSYFFKDAAPDAAYEGLFKNTIKTRLHFGGSYPSL 116
 Db 85 TNYNGNTVTILAVDVTNLYVVAFSANANSYFFKDATQLQKSNLFVGTQRHTLPFTGNYDNL 144

 Qy 117 E-GEKAYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIEN 175
 Db 145 ETAAGTRRESIELGPSPLDGAITSL-----YYDESVARSLVVIQMVSEAAARFRYIEQ 197

 Qy 176 QIRNNFQQR--IRPANNTISLENKWKLSFQIRTSGAN-GMFSEAVELE 221
 Db 198 EVRRSLQQTAGFTPNALMLSMENNWSMSLEVQQSGDNVSPFTGTVQLQ 246

RESULT 13

Q684J5_MOMCH

ID Q684J5_MOMCH PRELIMINARY; PRT; 264 AA.
 AC Q684J5;
 DT 11-OCT-2004, integrated into UniProtKB/TrEMBL.
 DT 11-OCT-2004, sequence version 1.
 DT 07-FEB-2006, entry version 8:
 DE Type I ribosome inactivating protein precursor (Fragment).
 GN Name=rip;
 OS Momordica charantia (Bitter melon) (Balsam pear).
 OS Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
 OC Spermatophyta; Magnoliophyta; eudicotyledons; core eudicotyledons;
 OC rosids; eurosids I; Cucurbitales; Cucurbitaceae; Momordica.
 OX NCBI_TaxID=3673;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=HN1;
 RA Nguyen Dinh C., Nguyen Thuy D., Le Thi Thu H., Nguyen Huy H.,
 RA Tran Thi Phuong L., Nong Van H.;
 RT "Expression of a gene encoding ribosome inactivating protein from
 RT bitter melon (*Momordica charantia*).";
 RL Submitted (AUG-2004) to the EMBL/GenBank/DBJ databases.


```

RN      [2]
RP      NUCLEOTIDE SEQUENCE.
RC      STRAIN=HN1;
RA      Nong V.;
RL      Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.
CC      -----
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CC      -----
DR      EMBL; AJ748278; CAH19208.1; -; Genomic_DNA.
DR      SMR; Q684J5; 2-264.
DR      GO; GO:0016787; F:hydrolase activity; IEA.
DR      GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
DR      GO; GO:0006952; P:defense response; IEA.
DR      GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
DR      GO; GO:0009405; P:pathogenesis; IEA.
DR      InterPro; IPR001574; RIP.
DR      Pfam; PF00161; RIP; 1.
DR      PRINTS; PR00396; SHIGARICIN.
DR      PROSITE; PS00275; SHIGA_RICIN; 1.
KW      Hydrolase; Plant defense; Protein synthesis inhibitor; Signal; Toxin.
FT      SIGNAL          <1           1           Potential.
FT      CHAIN           2           264           type I ribosome inactivating protein.
FT      NON_TER         1           1
SQ      SEQUENCE       264 AA;  29775 MW;  AD9E1175B70521AD CRC64;

```

Qy	5	VSFSTKGATYITYVNFLELNRVKLKPEGNHSHGIPLLRKADDPGKAFVLVALSNDNGQLA	64
		: : : : : : : : :	
Db	3	VNFDLSTATAKTYTKFIEDFRATLPFSHKVYDIPLLYSTISD-SRRFILLNLTSYAYETI	61
Qy	65	EIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLE-GEKAYR	123
		: : : : : : : : :	
Db	62	SVAIDVTINVYVYAYRTRDVSYFFKESPEAYNILFKGTRKITLPYTGNYENLQTAHKIR	121
Qy	124	ETTDLGIÉPLRIGIKKLDENAIIDNYKPTIEASSLLVVIQMVSEAAARFTFIENQIRNNFQQ	183
		: : : : : : :	
Db	122	ENIDLGLPALSSAI-----TTLFYNAQSAPSALLVLIQTAEAAARFKYIERHVAKYVAT	176
Qy	184	RIRPANNTISLENKWGKLSFQI-RTSGANGMFSEAVELEERANGKKYYVTAVDQ--VKPKI	240
		: : : : : :	
Db	177	NFKPNLAIISLENQWSALSQKIFLAQNQGGKFRNPVDLIKPTGERFQVTNVSDSVVKGNI	236
Qy	241	ALL	243
Db	237	KLL	239

RT "Cloning rip gene and identification of its resistance to Aspergillus
RT flavus.";
RL Submitted (JAN-2004) to the EMBL/GenBank/DBJ databases.
RN [4]
RP NUCLEOTIDE SEQUENCE OF 23-286.
RA Nguyen Huy H., Nghiem Ngoc M., Dao Huy P., Le Tran B., Nong Van H.;
RT "Expression of a RIP gene from Momordica charantia in E. coli.";
RL Submitted (SEP-2000) to the EMBL/GenBank/DBJ databases.
RN [5]
RP PROTEIN SEQUENCE OF 24-67.
RC TISSUE=Seed;
RX MEDLINE=91032105; PubMed=1699801; DOI=10.1016/0014-5793(90)80438-0;
RA Lee-Huang S., Huang P.L., Nara P.L., Chen H.-C., Kung H.-F., Huang P.,
RA Huang H.I., Huang P.L.;
RT "MAP 30: a new inhibitor of HIV-1 infection and replication.";
RL FEBS Lett. 272:12-18(1990).
RN [6]
RP STRUCTURE BY NMR OF 24-286, AND DNA-BINDING.
RX PubMed=10571185; DOI=10.1016/S0092-8674(00)81529-9;
RA Wang Y.-X., Neamati N., Jacob J., Palmer I., Stahl S.J., Kaufman J.D.,
RA Huang P.L., Huang P.L., Winslow H.E., Pommier Y., Wingfield P.T.,
RA Lee-Huang S., Bax A., Torchia D.A.;
RT "Solution structure of anti-HIV-1 and anti-tumor protein MAP30:
RT structural insights into its multiple functions.";
RL Cell 99:433-442(1999).
RN [7]
RP X-RAY CRYSTALLOGRAPHY (2.55 ANGSTROMS) OF 24-272.
RX PubMed=10329776; DOI=10.1107/S0907444999003297;
RA Yuan Y.-R., He Y.-N., Xiong J.-P., Xia Z.-X.;
RT "Three-dimensional structure of beta-momorcharin at 2.55 A
RT resolution.";
RL Acta Crystallogr. D 55:1144-1151(1999).
CC -!- FUNCTION: Irreversibly relaxes supercoiled DNA and catalyzes
CC double-stranded breakage. Acts also as a ribosome inactivating
CC protein.
CC -!- CATALYTIC ACTIVITY: Endohydrolysis of the N-glycosidic bond at one
CC specific adenosine on the 28S rRNA.
CC -!- PTM: Bound to a branched hexasaccharide.
CC -!- MISCELLANEOUS: Possesses anti-HIV and antitumoral activities.
CC Inhibits HIV-1 integrase.
CC -!- MISCELLANEOUS: Manganese or zinc required for enhancing substrate
CC binding rather than catalysis.
CC -!- MISCELLANEOUS: The oligosaccharide does not influence the fold of
CC the polypeptide chain and probably does not play a role in the
CC enzymatic function.
CC -!- MISCELLANEOUS: Is not toxic to uninfected normal cells as it
CC cannot enter into them.
CC -!- SIMILARITY: Belongs to the ribosome-inactivating protein family.
CC Type 1 RIP subfamily.
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CC -----
DR EMBL; S79450; AAB35194.2; -; Genomic_DNA.
DR EMBL; AF284811; AAG33028.1; -; Genomic_DNA.
DR EMBL; AY523412; AAS17014.1; -; mRNA.
DR EMBL; AJ294541; CAC08217.1; -; Genomic_DNA.
DR PIR; B61318; B61318.
DR PIR; JC4235; JC4235.
DR PDB; 1CF5; X-ray; A/B=24-272.
DR PDB; 1D8V; NMR; A=24-286.
DR InterPro; IPR001574; RIP.
DR Pfam; PF00161; RIP; 1.
DR PRINTS; PR00396; SHIGARICIN.
DR PROSITE; PS00275; SHIGA_RICIN; 1.
KW 3D-structure; Antiviral protein; Direct protein sequencing;
KW Glycoprotein; Hydrolase; Plant defense; Protein synthesis inhibitor;
KW Signal; Toxin.
FT SIGNAL 1 23
FT CHAIN 24 286 Ribosome-inactivating protein beta-
FT momorcharin.
FT /FTId=PRO_0000030773.
FT ACT_SITE 93 93 By similarity.
FT ACT_SITE 132 132 By similarity.
FT ACT_SITE 181 181 By similarity.
FT ACT_SITE 184 184 By similarity.


```

      :||||:|||| |: |: ||||:| || || | | | : |:| :|: |
Db      84 SVAIDVTNVYVVAYRTRDVSYFFKESPPAYNILFKGTRKITLPYTGNYENLQTAHKIR 143

Qy      124 ETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNNFQQ 183
      | |||: | | . : | | |||:| | |||| :| | :
Db      144 ENIDLGLPALSSAI-----TTLFYNAQSAPSALLVLIQTAEAAARFKYIERHVAKYVAT 198

Qy      184 RIRPANNTISLENKWGKLSFQI-RTSGANGMFSEAVELERANGKKYYVTAVDQ--VKPKI 240
      :| ||||:| || || | | | : |:: || || |
Db      199 NFKPNLAIISLENQWSALSQIIFLAQNQGGKFRNPVDLIKPTGERFQVTNVDSVVKGNI 258

Qy      241 ALL 243
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Db      259 KLL 261

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Search completed: July 20, 2006, 09:53:07
Job time : 259.197 secs

SCORE 1.3 BuildDate: 12/06/2005

SCORE Search Results Details for Application 10717243 and Search Result us-10-717-243-2.rai.

[Score Home](#) [Retrieve Application](#) [SCORE System](#) [SCORE](#) [Comments /](#)
[Page](#) [List](#) [Overview](#) [FAQ](#) [Suggestions](#)

This page gives you Search Results detail for the Application 10717243 and Search Result us-10-717-243-2.rai.

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OM protein - protein search, using sw model

Run on: July 20, 2006, 09:37:31 ; Search time 33.8063 Seconds
(without alignments)
649.885 Million cell updates/sec

Title: US-10-717-243-2
Perfect score: 1287
Sequence: 1 GLDTVSFSTKGATYITYVNF.....AVDQVKPKIALLKFDKDPK 251

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 650591 seqs, 87530628 residues

Total number of hits satisfying chosen parameters: 650591

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued Patents_AA:*
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3: /EMC_Celerra_SIDS3/ptodata/2/iaa/7_COMB.pep:*
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6: /EMC_Celerra_SIDS3/ptodata/2/iaa/RE_COMB.pep:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Match	Query Length	DB ID	Description
1	1287	100.0	251	1 US-08-425-336-2	Sequence 2, Appli
2	1287	100.0	251	1 US-08-488-113B-2	Sequence 2, Appli
3	1287	100.0	251	1 US-08-477-484B-2	Sequence 2, Appli
4	1287	100.0	251	1 US-08-646-360-2	Sequence 2, Appli
5	1287	100.0	251	1 US-08-621-803-247	Sequence 247, App
6	1287	100.0	251	2 US-08-839-765-2	Sequence 2, Appli
7	1287	100.0	251	2 US-09-136-389-2	Sequence 2, Appli
8	1287	100.0	251	2 US-09-217-352-247	Sequence 247, App
9	1287	100.0	251	2 US-09-610-838-2	Sequence 2, Appli
10	1287	100.0	251	2 US-09-711-485-2	Sequence 2, Appli

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12	1284	99.8	251	1	US-07-901-707-2	Sequence 2, Appli
13	1284	99.8	251	1	US-07-988-430-2	Sequence 2, Appli
14	1284	99.8	251	5	PCT-US92-09487-2	Sequence 2, Appli
15	1284	99.8	293	1	US-08-621-803-259	Sequence 259, App
16	1284	99.8	293	2	US-09-217-352-259	Sequence 259, App
17	1284	99.8	309	1	US-08-621-803-253	Sequence 253, App
18	1284	99.8	309	2	US-09-217-352-253	Sequence 253, App
19	1284	99.8	332	1	US-08-621-803-251	Sequence 251, App
20	1284	99.8	332	2	US-09-217-352-251	Sequence 251, App
21	1282	99.6	251	1	US-08-425-336-108	Sequence 108, App
22	1282	99.6	251	1	US-08-488-113B-108	Sequence 108, App
23	1282	99.6	251	1	US-08-477-484B-108	Sequence 108, App
24	1282	99.6	251	1	US-08-646-360-108	Sequence 108, App
25	1282	99.6	251	2	US-08-839-765-108	Sequence 108, App
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27	1282	99.6	251	2	US-09-610-838-108	Sequence 108, App
28	1282	99.6	251	2	US-09-711-485-108	Sequence 108, App
29	1279	99.4	251	1	US-08-425-336-103	Sequence 103, App
30	1279	99.4	251	1	US-08-425-336-104	Sequence 104, App
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37	1279	99.4	251	1	US-08-488-113B-106	Sequence 106, App
38	1279	99.4	251	1	US-08-488-113B-109	Sequence 109, App
39	1279	99.4	251	1	US-08-477-484B-103	Sequence 103, App
40	1279	99.4	251	1	US-08-477-484B-104	Sequence 104, App
41	1279	99.4	251	1	US-08-477-484B-105	Sequence 105, App
42	1279	99.4	251	1	US-08-477-484B-106	Sequence 106, App
43	1279	99.4	251	1	US-08-477-484B-109	Sequence 109, App
44	1279	99.4	251	1	US-08-646-360-103	Sequence 103, App
45	1279	99.4	251	1	US-08-646-360-104	Sequence 104, App

ALIGNMENTS

RESULT 1

US-08-425-336-2

; Sequence 2, Application US/08425336

; Patent No. 5621083

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; APPLICANT: Carroll, Stephen F.

; APPLICANT: Studnika, Gary M.

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating

; TITLE OF INVENTION: Proteins

; NUMBER OF SEQUENCES: 140

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun

; STREET: 6300 Sears Tower, 233 South Wacker Drive

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60606-6402

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/425,336

; FILING DATE: 18-APR-1995

; CLASSIFICATION: 530

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 08/064,691

; FILING DATE: 12-MAY-1993

; APPLICATION NUMBER: US 07/901,707

; FILING DATE: 19-JUN-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/787,567

; FILING DATE: 04-NOV-1991

; ATTORNEY/AGENT INFORMATION:

```

; NAME: Meyers, Thomas C.
; REGISTRATION NUMBER: P-36,989
; REFERENCE/DOCKET NUMBER: 31394
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-425-336-2

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Query Match          100.0%; Score 1287; DB 1; Length 251;
Best Local Similarity 100.0%; Pred. No. 1.3e-124;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 GLDTSVFSTKGATYITYVNFNLNRVVKLKPEGNSHGIPLLRKKCDPDKCFVLVALSNDN 60
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Db      1 GLDTSVFSTKGATYITYVNFNLNRVVKLKPEGNSHGIPLLRKKCDPDKCFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
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Db     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
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Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 FQQRIRPANNTISLENKWGKLSFQIRTSANGMFSEAVELERANGKKYYVTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
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Db    241 ALLKFVDKDPK 251

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RESULT 2

US-08-488-113B-2

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; Sequence 2, Application US/08488113B
; Patent No. 5744580
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 169
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/488,113B
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/425,336
; FILING DATE: 18-APR-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992

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; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 11022US07/200-70.P3.C2A
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-488-113B-2

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Query Match          100.0%; Score 1287; DB 1; Length 251;
Best Local Similarity 100.0%; Pred. No. 1.3e-124;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db      1 GLDTVSFSTKGATYITYVNFNLRLVRLKPEGNHGIPLLRKKCDPDKCFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
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Db     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
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Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSYGANGMFSEAVELEERANGKYYVTAVDQVKPKI 240
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Db    181 FQQRIRPANNTISLENKWGKLSFQIRTSYGANGMFSEAVELEERANGKYYVTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
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Db    241 ALLKFVDKDPK 251

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RESULT 3
US-08-477-484B-2
; Sequence 2, Application US/08477484B
; Patent No. 5756699
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 169
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/477,484B
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/425,336

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; FILING DATE: 18-APR-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 11022US07/200-70.P3.C2A
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-477-484B-2

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Query Match          100.0%; Score 1287; DB 1; Length 251;
Best Local Similarity 100.0%; Pred. No. 1.3e-124;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
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Db      61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
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Db      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180

Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTS GANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
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Db      181 FQQRIRPANNTISLENKWGKLSFQIRTS GANGMFSEAVELERANGKKYYVTAVDQVKPKI 240

Qy      241 ALLKFVDKDPK 251
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Db      241 ALLKFVDKDPK 251

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RESULT 4
US-08-646-360-2
; Sequence 2, Application US/08646360
; Patent No. 5837491
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 173
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS

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; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/646,360
; FILING DATE: 13-MAY-1996
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/US94/05348
; FILING DATE: 12-MAY-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 200-70.P4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-646-360-2

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Query Match          100.0%; Score 1287; DB 1; Length 251;
Best Local Similarity 100.0%; Pred. No. 1.3e-124;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db      1 GLDTVSFSTKGATYITYVNFNLRLVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
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Db     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 FQQRIRPANNTISLENKWGKLSFQIRTSANGMFSEAVELERANGKKYYVTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
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Db    241 ALLKFVDKDPK 251

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RESULT 5

US-08-621-803-247

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; Sequence 247, Application US/08621803
; Patent No. 5851802
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; TITLE OF INVENTION: Methods for Recombinant Microbial Production of
; TITLE OF INVENTION: Fusion Proteins and BPI-Derived Peptides
; NUMBER OF SEQUENCES: 265
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America

```

```

; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/621,803
; FILING DATE: 22-MAR-1996
; ATTORNEY/AGENT INFORMATION:
; NAME: Borun, Michael F.
; REGISTRATION NUMBER: 25,447
; REFERENCE/DOCKET NUMBER: 27129/33199
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 247:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-621-803-247

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Query Match      100.0%; Score 1287; DB 1; Length 251;
Best Local Similarity 100.0%; Pred. No. 1.3e-124;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 GLDTSVSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60
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Db      1 GLDTSVSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTS GANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
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Db    181 FQQRIRPANNTISLENKWGKLSFQIRTS GANGMFSEAVELERANGKKYYVTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
        ||||||||
Db    241 ALLKFVDKDPK 251

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RESULT 6
US-08-839-765-2
; Sequence 2, Application US/08939765
; Patent No. 6146631
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 169
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/839,765
; FILING DATE: 15-APR-1997

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; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/425,336
; FILING DATE: 18-APR-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 11022US09/200-70.P3.C3
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-839-765-2

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Query Match          100.0%; Score 1287; DB 2; Length 251;
Best Local Similarity 100.0%; Pred. No. 1.3e-124;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 GLDTSVSFSTKGATYITYVNFNLRLVRLKPEGNHSHGIPLLRKKCDDPGKCFVLVALSNDN 60
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 GLDTSVSFSTKGATYITYVNFNLRLVRLKPEGNHSHGIPLLRKKCDDPGKCFVLVALSNDN 60

Qy      61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180

Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240

Qy      241 ALLKFVDKDPK 251
        |||||||||
Db      241 ALLKFVDKDPK 251

```

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RESULT 7
US-09-136-389-2
; Sequence 2, Application US/09136389
; Patent No. 6146850
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 173
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:

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; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/136,389
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/646,360
; FILING DATE: 13-MAY-1996
; APPLICATION NUMBER: PCT/US94/05348
; FILING DATE: 12-MAY-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 200-70.P4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-136-389-2

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Query Match          100.0%; Score 1287; DB 2; Length 251;
Best Local Similarity 100.0%; Pred. No. 1.3e-124;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 GLDTSVSFSTKGATYITYVNFNLNLRVKKLKEGNSHGIPLLRKKCDGPKCFVLVALSNDN 60
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 GLDTSVSFSTKGATYITYVNFNLNLRVKKLKEGNSHGIPLLRKKCDGPKCFVLVALSNDN 60

Qy      61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy      121 AYRETTDLGIEPLRIGIKKLDENAIKNYKPTIASSLLVVIQMVSEARFTFIENQIRNN 180
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      121 AYRETTDLGIEPLRIGIKKLDENAIKNYKPTIASSLLVVIQMVSEARFTFIENQIRNN 180

Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240

Qy      241 ALLKFVDKDPK 251
        ||||||||
Db      241 ALLKFVDKDPK 251

```

RESULT 8

US-09-217-352-247

; Sequence 247, Application US/09217352

; Patent No. 6274344

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; TITLE OF INVENTION: Methods for Recombinant Microbial Production of

; TITLE OF INVENTION: Fusion Proteins and BPI-Derived Peptides

; NUMBER OF SEQUENCES: 265

; CORRESPONDENCE ADDRESS:

```

; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/217,352
; FILING DATE:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/621,803
; FILING DATE: 22-MAR-1996
; ATTORNEY/AGENT INFORMATION:
; NAME: Borun, Michael F.
; REGISTRATION NUMBER: 25,447
; REFERENCE/DOCKET NUMBER: 27129/33199
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 247:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-217-352-247

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Query Match      100.0%; Score 1287; DB 2; Length 251;
Best Local Similarity 100.0%; Pred. No. 1.3e-124;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 GLDTSVSFSTKGATYITYVNFNLRLVRLKPEGNHSHGIPLLRKKCDPGKCFVLVALSNDN 60
|
Db      1 GLDTSVSFSTKGATYITYVNFNLRLVRLKPEGNHSHGIPLLRKKCDPGKCFVLVALSNDN 60
|
Qy     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
|
Db     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
|
Qy    121 AYRETTDLGIEPLRIGIKKL DENAIDNYKPTEIASSLLVVIQMVSEAA RFTFIENQIRNN 180
|
Db    121 AYRETTDLGIEPLRIGIKKL DENAIDNYKPTEIASSLLVVIQMVSEAA RFTFIENQIRNN 180
|
Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTS GANGMFSEAVELERANGKKYVTA VDQVKPKI 240
|
Db    181 FQQRIRPANNTISLENKWGKLSFQIRTS GANGMFSEAVELERANGKKYVTA VDQVKPKI 240
|
Qy    241 ALLKFVDKDPK 251
|
Db    241 ALLKFVDKDPK 251

```

RESULT 9

US-09-610-838-2

; Sequence 2, Application US/09610838

; Patent No. 6376217

GENERAL INFORMATION:

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; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 173
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661

```

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; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/610,838
; FILING DATE: 06-JUL-2000
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/09/136,389
; FILING DATE: 18-AUG-1998
; APPLICATION NUMBER: 08/646,360
; FILING DATE: 13-MAY-1996
; APPLICATION NUMBER: PCT/US94/05348
; FILING DATE: 12-MAY-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 200-70.P4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-610-838-2

```

```

Query Match      100.0%; Score 1287; DB 2; Length 251;
Best Local Similarity 100.0%; Pred. No. 1.3e-124;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 GLDTVSFSTKGATYITYVNFNLRLVKLPKPNHSHGIPLLRKKCDPGKCFVLVALSNDN 60
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 GLDTVSFSTKGATYITYVNFNLRLVKLPKPNHSHGIPLLRKKCDPGKCFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIASSLLVVIQMVSEAAARFTFIENQIRNN 180
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIASSLLVVIQMVSEAAARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
        ||||||||||
Db    241 ALLKFVDKDPK 251

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```

RESULT 10
US-09-711-485-2
; Sequence 2, Application US/09711485
; Patent No. 6649742
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.

```



```

; APPLICANT: Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 169
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/711,485
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/839,765
; FILING DATE:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 11022US09/200-70.P3.C3
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-711-485-2

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```

Query Match          100.0%; Score 1287; DB 2; Length 251;
Best Local Similarity 100.0%; Pred. No. 1.3e-124;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 GLDTVSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60
        |||
Db      1 GLDTVSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        |||
Db     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIASSLLVVIQMVSEAAARFTFIENQIRNN 180
        |||
Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIASSLLVVIQMVSEAAARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKYYVTAVDQVKPKI 240
        |||
Db    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKYYVTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
        |||
Db    241 ALLKFVDKDPK 251

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RESULT 11
 US-09-645-603B-2
 ; Sequence 2, Application US/09645603B
 ; Patent No. 6652861
 ; GENERAL INFORMATION:
 ; APPLICANT: LEE-HUANG, Sylvia
 ; TITLE OF INVENTION: Anti-HIV and Anti-tumor Peptides and Truncated Polypeptides of
 ; TITLE OF INVENTION: map30 and gap31
 ; FILE REFERENCE: LEE-HUANG 4A
 ; CURRENT APPLICATION NUMBER: US/09/645,603B
 ; CURRENT FILING DATE: 2000-08-25
 ; PRIOR APPLICATION NUMBER: US 60/150,885
 ; PRIOR FILING DATE: 1999-08-26
 ; NUMBER OF SEQ ID NOS: 2
 ; SOFTWARE: PatentIn version 3.2
 ; SEQ ID NO 2
 ; LENGTH: 251
 ; TYPE: PRT
 ; ORGANISM: Gelonium multiflorum
 US-09-645-603B-2

Query Match 100.0%; Score 1287; DB 2; Length 251;
 Best Local Similarity 100.0%; Pred. No. 1.3e-124;
 Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 GLDTVSFSTKGATYITYVNFNLRLVKLKPEGNHSHGIPLLRKKCDDPGKCFVLVALSNDN 60
         ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 GLDTVSFSTKGATYITYVNFNLRLVKLKPEGNHSHGIPLLRKKCDDPGKCFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFSGSYPSLEGEK. 120
         ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFSGSYPSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIASSLLVVIQMVSEAAARFTFIENQIRNN 180
         ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIASSLLVVIQMVSEAAARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
         ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
         ||||||||
Db    241 ALLKFVDKDPK 251
  
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RESULT 12
 US-07-901-707-2
 ; Sequence 2, Application US/07901707
 ; Patent No. 5376546
 ; GENERAL INFORMATION:
 ; APPLICANT: Bernhard, Susan L.
 ; APPLICANT: Better, Marc D.
 ; APPLICANT: Carroll, Steve F.
 ; APPLICANT: Lane, Julie A.
 ; TITLE OF INVENTION: Materials Comprising and Methods of
 ; TITLE OF INVENTION: Composition and Use for Ribosome-Inactivating Proteins
 ; NUMBER OF SEQUENCES: 57
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray &
 ; ADDRESSEE: Bicknell
 ; STREET: Two First National Plaza, 20 South Clark
 ; STREET: Street
 ; CITY: Chicago
 ; STATE: Illinois
 ; COUNTRY: USA
 ; ZIP: 60603
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: PatentIn Release #1.0, Version #1.25
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/07/901,707
 ; FILING DATE: 19920619
 ; CLASSIFICATION: 435

```

; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: No. 5376546and, Greta E.
; REGISTRATION NUMBER: 35,302
; REFERENCE/DOCKET NUMBER: 27129/30910
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (312) 346-5750
; TELEFAX: (312) 984-5750
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-07-901-707-2

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Query Match          99.8%; Score 1284; DB 1; Length 251;
Best Local Similarity 99.6%; Pred. No. 2.7e-124;
Matches 250; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 GLDTSVFSSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDDEPGKCFVLVALSNDN 60
      |||
Db      1 GLDTSVFSSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDDEPGKCFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
      |||
Db     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGTYPSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIASSLLVVIQMVSEAAARFTFIENQIRNN 180
      |||
Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIASSLLVVIQMVSEAAARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELEERANGKKYYTAVDQVKPKI 240
      |||
Db    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELEERANGKKYYTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
      |||
Db    241 ALLKFVDKDPK 251

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RESULT 13

US-07-988-430-2

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; Sequence 2, Application US/07988430
; Patent No. 5416202
; GENERAL INFORMATION:
; APPLICANT: Bernhard, Susan L.
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Lane, Julie A.
; APPLICANT: Lei, Shau-Ping
; TITLE OF INVENTION: Materials Comprising and Methods of
; TITLE OF INVENTION: Preparation and Use for Ribosome-Inactivating Proteins
; NUMBER OF SEQUENCES: 101
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray &
; ADDRESSEE: Bicknell
; STREET: Two First National Plaza, 20 South Clark
; STREET: Street
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60603
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/988,430
; FILING DATE: 19921209
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:

```

```

; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: No. 5416202and, Greta E.
; REGISTRATION NUMBER: 35302
; REFERENCE/DOCKET NUMBER: 31133
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (312) 346-5750
; TELEFAX: (312) 984-9740
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-07-988-430-2

```

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Query Match          99.8%; Score 1284; DB 1; Length 251;
Best Local Similarity 99.6%; Pred. No. 2.7e-124;
Matches 250; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 GLDTSVSFSTKGATYITYVNFNLNLRVVKLKPEGNSHGIPLLRKKCCDDPGKCFVLVALSNDN 60
        |||
Db      1 GLDTSVSFSTKGATYITYVNFNLNLRVVKLKPEGNSHGIPLLRKKCCDDPGKCFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGYYQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        |||
Db     61 GQLAEIAIDVTSVYVVGYYQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGTYPSPLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
        |||
Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
        |||
Db    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
        |||
Db    241 ALLKFVDKDPK 251

```

RESULT 14

PCT-US92-09487-2

; Sequence 2, Application PC/TUS9209487

; GENERAL INFORMATION:

```

; APPLICANT: Bernhard, Susan L.
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Lane, Julie A.
; APPLICANT: Lei, Shau-Ping
; TITLE OF INVENTION: Materials Comprising and Methods of
; TITLE OF INVENTION: Preparation and Use for Ribosome-Inactivating Proteins
; NUMBER OF SEQUENCES: 101
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray &
; ADDRESSEE: Bicknell
; STREET: Two First National Plaza, 20 South Clark
; STREET: Street
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60603
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: PCT/US92/09487
; FILING DATE: 19921104
; CLASSIFICATION:

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; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Noland, Greta E.
; REGISTRATION NUMBER: 35302
; REFERENCE/DOCKET NUMBER: 31133
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (312) 346-5750
; TELEFAX: (312) 984-9740
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: protein
PCT-US92-09487-2

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Query Match          99.8%; Score 1284; DB 5; Length 251;
Best Local Similarity 99.6%; Pred. No. 2.7e-124;
Matches 250; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 GLDTVSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 GLDTVSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGTYSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTS GANGMFSEAVELEERANGKYYVTAVDQVKPKI 240
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 FQQRIRPANNTISLENKWGKLSFQIRTS GANGMFSEAVELEERANGKYYVTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
        ||||||||
Db    241 ALLKFVDKDPK 251

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RESULT 15
US-08-621-803-259
; Sequence 259, Application US/08621803
; Patent No. 5851802
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; TITLE OF INVENTION: Methods for Recombinant Microbial Production of
; TITLE OF INVENTION: Fusion Proteins and BPI-Derived Peptides
; NUMBER OF SEQUENCES: 265
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/621,803
; FILING DATE: 22-MAR-1996
; ATTORNEY/AGENT INFORMATION:
; NAME: Borun, Michael F.
; REGISTRATION NUMBER: 25,447
; REFERENCE/DOCKET NUMBER: 27129/33199
; TELECOMMUNICATION INFORMATION:

```

; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 259:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 293 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-621-803-259

Query Match 99.8%; Score 1284; DB 1; Length 293;
Best Local Similarity 99.6%; Pred. No. 3.4e-124;
Matches 250; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

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          |||
Db      23 GLDTVSFSTKGATYITYVNFLNELRVKLPKPEGNHGIPLLRKKCDPGKCFVLVALSNDN 82

Qy      61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYP SLEGEK 120
          |||
Db      83 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGTYP SLEGEK 142

Qy      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
          |||
Db      143 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 202

Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKYYVTAVDQVKPKI 240
          |||
Db      203 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKYYVTAVDQVKPKI 262

Qy      241 ALLKFVDKDPK 251
          |||
Db      263 ALLKFVDKDPK 273
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Search completed: July 20, 2006, 09:38:55
Job time : 33.8063 secs

SCORE 1.3 BuildDate: 12/06/2005

SCORE Search Results Details for Application 10717243 and Search Result us-10-717-243-2.rag.

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OM protein - protein search, using sw model

Run on: July 20, 2006, 09:35:59 ; Search time 203.301 Seconds
(without alignments)
564.490 Million cell updates/sec

Title: US-10-717-243-2
Perfect score: 1287
Sequence: 1 GLDTVSFSTKGATYITYVNF.....AVDQVKPKIALLKFDKDPK 251

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2589679 seqs, 457216429 residues

Total number of hits satisfying chosen parameters: 2589679

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_8:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*
9: geneseqp2005s:*
10: geneseqp2006s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB ID	Description
1	1287	100.0	251	2 AAR63903	Aar63903 Type I ri
2	1287	100.0	251	8 ADG63044	Adg63044 Gelonium
3	1287	100.0	316	5 ABG71551	Abg71551 G. multif
4	1287	100.0	498	9 AEB68722	Aeb68722 scFv23-ge
5	1287	100.0	507	5 ABG71552	Abg71552 Murine sc
6	1284	99.8	293	2 AAW29300	Aaw29300 BPI pepti
7	1284	99.8	309	2 AAW29303	Aaw29303 BPI pepti

8	1284	99.8	332	2	AAW29294	Aaw29294 BPI pepti
9	1283	99.7	751	9	AEC95468	Aec95468 Ep-CAM-ta
10	1282	99.6	251	2	AAR63923	Aar63923 Type I RI
11	1279	99.4	251	2	AAR63921	Aar63921 Type I RI
12	1279	99.4	251	2	AAR63918	Aar63918 Type I RI
13	1279	99.4	251	2	AAR63920	Aar63920 Type I RI
14	1279	99.4	251	2	AAR63919	Aar63919 Type I RI
15	1279	99.4	251	2	AAR63924	Aar63924 Type I RI
16	1278	99.3	251	2	AAR63922	Aar63922 Type I RI
17	1278	99.3	251	2	AAR63917	Aar63917 Type I RI
18	1278	99.3	251	2	AAR63912	Aar63912 Type I RI
19	1275	99.1	251	2	AAR74177	Aar74177 Type I ri
20	1269	98.6	251	2	AAR37291	Aar37291 Plant typ
21	1269	98.6	251	2	AAR63914	Aar63914 Type I RI
22	1261	98.0	251	2	AAR63915	Aar63915 Type I RI
23	1252	97.3	251	2	AAR63916	Aar63916 Type I RI
24	1242.5	96.5	258	2	AAR22227	Aar22227 Gelonin t
25	1219.5	94.8	513	9	AEC95310	Aec95310 Murine sF
26	1208	93.9	506	9	AEB68720	Aeb68720 scFv23-ge
27	1176	91.4	235	2	AAR63913	Aar63913 Type I RI
28	346	26.9	263	2	AAR63905	Aar63905 Type I ri
29	346	26.9	263	2	AAR74179	Aar74179 Type I ri
30	346	26.9	263	8	ADG63043	Adg63043 Momordica
31	344	26.7	565	1	AAP50166	Aap50166 Sequence
32	344	26.7	565	4	AAG78300	Aag78300 Castor be
33	344	26.7	574	1	AAP70325	Aap70325 Sequence
34	343	26.7	267	2	AAR30722	Aar30722 Ricin A f
35	343	26.7	267	2	AAR37290	Aar37290 Ricin A c
36	343	26.7	267	2	AAR63902	Aar63902 Ricin A-c
37	343	26.7	267	3	AAB19265	Aab19265 Amino aci
38	343	26.7	267	7	ADC24288	Adc24288 Ricin tox
39	343	26.7	268	2	AAR39570	Aar39570 Sequence
40	343	26.7	268	10	AEF18884	Aef18884 Ricin, SE
41	343	26.7	290	2	AAW21699	Aaw21699 Ricin A-c
42	343	26.7	290	2	AAW25136	Aaw25136 Ricin A-c
43	343	26.7	332	1	AAP70097	Aap70097 Ricin A.
44	343	26.7	332	1	AAP70838	Aap70838 Sequence
45	343	26.7	332	1	AAP95639	Aap95639 Ricin A e

ALIGNMENTS

RESULT 1

AAR63903

ID AAR63903 standard; protein; 251 AA.

XX

AC AAR63903;

XX

DT 25-MAR-2003 (revised)

DT 27-JUL-1995 (first entry)

XX

DE Type I ribosome-inactivating protein gelonin.

XX

KW Type I ribosome-inactivating proteins; RIPs; gelonin;
KW cytotoxic therapeutic agents; autoimmune disease; cancer;
KW graft-versus-host disease.

XX

OS Gelonium multiflorum.

XX

PN WO9426910-A1.

XX

PD 24-NOV-1994.

XX

PF 12-MAY-1994; 94WO-US005348.

XX

PR 12-MAY-1993; 93US-00064691.

XX

PA (XOMA) XOMA CORP.

XX

PI Better MD, Carroll SF, Studnicka GM;

XX

DR WPI; 1995-006804/01.

DR N-PSDB; AAQ75532.

XX

PT Polynucleotide(s) encoding type I ribosome-inactivating proteins - which

PT are suitable for use as components of cytotoxic therapeutic agents.
 XX
 PS Example 1; Fig 1; 221pp; English.
 XX
 CC AAQ75532 encodes AAR63903 type I ribosome-inactivating protein (RIP)
 CC gelonin, one of the nine RIPs described in AAR63903-R63911. RIPs are key
 CC components of cytotoxic therapeutic agents (CTAs), which include gene
 CC fusion products and immunoconjugates. CTAs may be used to selectively
 CC eliminate any cell type to which a RIP component is targetted, by the
 CC specific binding capacity of the second component of the agent. They can
 CC be used in the treatment of diseases where the elimination of a
 CC particular cell type is desired, such as autoimmune disease, cancer and
 CC graft-versus-host disease. (Updated on 25-MAR-2003 to correct PN field.)
 XX
 SQ Sequence 251 AA;

Query Match 100.0%; Score 1287; DB 2; Length 251;
 Best Local Similarity 100.0%; Pred. No. 1.9e-125;
 Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 GLDTSVFSTKGATYITYVNFNLRLVRLKPEGNHGIPLLRKKCDPDKCFVLVALSNDN 60
          |||
Db      1 GLDTSVFSTKGATYITYVNFNLRLVRLKPEGNHGIPLLRKKCDPDKCFVLVALSNDN 60

Qy      61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
          |||
Db      61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
          |||
Db      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180

Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTSANGMFSEAVELERANGKYYVTAVDQVKPKI 240
          |||
Db      181 FQQRIRPANNTISLENKWGKLSFQIRTSANGMFSEAVELERANGKYYVTAVDQVKPKI 240

Qy      241 ALLKFVDKDPK 251
          |||
Db      241 ALLKFVDKDPK 251

```

RESULT 2
 ADG63044
 ID ADG63044 standard; protein; 251 AA.
 XX
 AC ADG63044;
 XX
 DT 11-MAR-2004 (first entry)
 XX
 DE Gelonium anti-HIV protein 31kDa (GAP31).
 XX
 KW anti-HIV; cytostatic; peptide therapy; anti-tumour; antiviral; MAP30;
 KW GAP31; HIV; tumour; gelonium anti-HIV protein 31kDa.
 XX
 OS Gelonium multiflorum.
 XX
 PN US6652861-B1.
 XX
 PD 25-NOV-2003.
 XX
 PF 25-AUG-2000; 2000US-00645603.
 XX
 PR 26-AUG-1999; 99US-0150885P.
 XX
 PA (UYN Y) UNIV NEW YORK STATE.
 XX
 PI Lee-Huang S;
 XX
 DR WPI; 2004-050519/05.
 XX
 PT New MAP30 or GAP31 peptides or polypeptides having an anti-tumor and
 PT antiviral activity, useful for treating human immunodeficiency virus
 PT infection or tumor.
 XX
 PS Example 1; SEQ ID NO 2; 22pp; English.
 XX

CC The invention describes an isolated peptide or polypeptide having an anti
 CC -tumour and antiviral activity. Also described is a composition
 CC comprising the isolated peptide or polypeptide, and a carrier, excipient
 CC or auxiliary agent. Specifically claimed are MAP30 or GAP31 peptides or
 CC polypeptides. The peptide or polypeptide is useful for treating HIV
 CC infection, and tumour. This is the amino acid sequence of Gelonium anti-
 CC HIV protein 30kDa (MAP30).

XX
 SQ Sequence 251 AA;

Query Match 100.0%; Score 1287; DB 8; Length 251;
 Best Local Similarity 100.0%; Pred. No. 1.9e-125;
 Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GLDTSVSFSTKGATYITYVNFNLNLRVCLKPEGNSHGIPLLRKKCDPDKCFVLVALSNDN 60
 Db 1 GLDTSVSFSTKGATYITYVNFNLNLRVCLKPEGNSHGIPLLRKKCDPDKCFVLVALSNDN 60
 Qy 61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
 Db 61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
 Qy 121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
 Db 121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
 Qy 181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
 Db 181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
 Qy 241 ALLKFVDKDPK 251
 Db 241 ALLKFVDKDPK 251

RESULT 3

ABG71551

ID ABG71551 standard; protein; 316 AA.

XX

AC ABG71551;

XX

DT 08-JAN-2003 (first entry)

XX

DE G. multiflorum recombinant gelonin (rGel) toxin.

XX

KW Modified protein; reduced antigenicity; modified toxin; gelonin;
 KW designer toxin; immunotoxin; proteinaceous compound; cancer;
 KW microbial pathogenesis; acquired immunodeficiency syndrome; AIDS;
 KW autoimmune disease; hyperproliferative disorder; leukaemia; arthritis;
 KW inflammatory disease; cardiovascular disease; diabetes;
 KW pathogenic disease; cytostatic; antiarthritic; antiinflammatory;
 KW cardiant; antidiabetic; virucide; protozoacide; fungicide; antibacterial;
 KW recombinant gelonin; rGel.

XX

OS Gelonium multiflorum.

XX

PN WO200269886-A2.

XX

PD 12-SEP-2002.

XX

PF 12-FEB-2002; 2002WO-US004195.

XX

PR 12-FEB-2001; 2001US-0268402P.

XX

PA (RERE-) RES DEV FOUND.

XX

PI Rosenblum MG, Cheung L;

XX

DR WPI; 2002-750431/81.

DR

N-PSDB; ABS56021.

XX

PT Generating a modified protein with reduced antigenicity for treating
 PT cancer, AIDS, autoimmune diseases, comprises identifying a protein region
 PT antigenic in the first subject using antiserum from either the first or a
 PT second subject.

XX

PR 17-MAR-1995; 95US-00404499.
 PR 26-MAY-1999; 99US-00320156.
 XX
 PA (RERE-) RES DEV FOUND.
 XX
 PI Rosenblum M, Shawver LK;
 XX
 DR WPI; 2005-561813/57.
 DR N-PSDB; AEB68721.
 XX
 PT New immunotoxins directed against c-erbB-2 related surface antigens,
 PT useful for treating neoplastic diseases, e.g. carcinoma or
 PT adenocarcinoma.
 XX
 PS Disclosure; SEQ ID NO 13; 60pp; English.
 XX
 CC The invention relates to a composition comprising a conjugate of an
 CC antibody exhibiting binding specificity for an extracellular epitope of c
 CC -erbB-2 protein and a plant derived toxin, where the toxin is
 CC pharmacologically effective against neoplastic cells and is selected from
 CC gelonin, full length recombinant gelonin, functional gelonin fragments or
 CC functional gelonin derivatives. Also described is a pharmaceutical
 CC composition comprising the composition above and a pharmaceutical
 CC vehicle. For treating neoplastic diseases, e.g. human mammary carcinomas,
 CC human ovarian carcinomas, lung carcinomas, gastric tumors, salivary gland
 CC adenocarcinomas, or colon adenocarcinomas. The present sequence
 CC represents a scFv23-gelonin amino acid sequence, which is used in an
 CC example from the present invention.
 XX
 SQ Sequence 498 AA;

Query Match 100.0%; Score 1287; DB 9; Length 498;
 Best Local Similarity 100.0%; Pred. No. 5.2e-125;
 Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GLDTSVSFTKGATYITYVNFNLRLVRLKPEGNHSHGIPLLRKKCDPGKCFVLVALSNDN 60
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 247 GLDTSVSFTKGATYITYVNFNLRLVRLKPEGNHSHGIPLLRKKCDPGKCFVLVALSNDN 306
 Qy 61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 307 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 366
 Qy 121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARETFIENQIRNN 180
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 367 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARETFIENQIRNN 426
 Qy 181 FQQRIRPANNTISLENKWGKLSFQIRTSYGANGMFSEAVELERANGKKYVYTAVDQVKPKI 240
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 427 FQQRIRPANNTISLENKWGKLSFQIRTSYGANGMFSEAVELERANGKKYVYTAVDQVKPKI 486
 Qy 241 ALLKFVDKDPK 251
 |||||||||
 Db 487 ALLKFVDKDPK 497

RESULT 5
 ABG71552
 ID ABG71552 standard; protein; 507 AA.
 XX
 AC ABG71552;
 XX
 DT 08-JAN-2003 (first entry)
 XX
 DE Murine scfvMEL/G. multiflorum rGel fusion protein.
 XX
 KW Modified protein; reduced antigenicity; modified toxin; gelonin;
 KW designer toxin; immunotoxin; proteinaceous compound; cancer;
 KW microbial pathogenesis; acquired immunodeficiency syndrome; AIDS;
 KW autoimmune disease; hyperproliferative disorder; leukaemia; arthritis;
 KW inflammatory disease; cardiovascular disease; diabetes;
 KW pathogenic disease; cytostatic; antiarthritic; antiinflammatory;
 KW cardiant; antidiabetic; virucide; protozoacide; fungicide; antibacterial;
 KW murine; single-chain ZME-018 antibody; recombinant gelonin; rGel;
 KW scfvMEL/rGel; mutant; mutein.
 XX

OS Mus sp.
OS Gelonium multiflorum.
OS Synthetic.
OS Chimeric.
XX
PN WO200269886-A2.
XX
PD 12-SEP-2002.
XX
PF 12-FEB-2002; 2002WO-US004195.
XX
PR 12-FEB-2001; 2001US-0268402P.
XX
PA (RERE-) RES DEV FOUND.
XX
PI Rosenblum MG, Cheung L;
XX
DR WPI; 2002-750431/81.
DR N-PSDB; ABS56029.
XX
PT Generating a modified protein with reduced antigenicity for treating
PT cancer, AIDS, autoimmune diseases, comprises identifying a protein region
PT antigenic in the first subject using antiserum from either the first or a
PT second subject.
XX
PS Disclosure; Page 174-176; 176pp; English.
XX
CC The present invention relates to a method of generating a modified
CC protein with reduced antigenicity while maintaining its biological
CC activity. The method comprises identifying a region of the protein that
CC is antigenic in a first subject using antiserum from either the first
CC subject or a second subject of the same species as the first subject. In
CC particular the invention discloses modified toxin compounds, for example
CC gelonin toxin derived from Gelonium multiflorum, that are truncated
CC and/or possess reduced antigenicity. Such designer toxins have
CC therapeutic, diagnostic, and preventative benefits, particularly as
CC immunotoxins. The method of the invention is useful for generating
CC proteinaceous compounds with less antigenicity. The immunotoxin and
CC gelonin toxin are useful for treating cancer, e.g. prostate, lung, brain,
CC skin, liver, breast, lymphoid, stomach, testicular, ovarian, pancreatic,
CC bone, bone marrow, head and neck, cervical, oesophagus, eye, gall
CC bladder, kidney, adrenal glands, heart, colon, or blood cancer. The
CC compositions of the invention are also useful for treating microbial
CC pathogenesis, acquired immunodeficiency syndrome (AIDS), autoimmune
CC diseases, hyperproliferative disorders including cancer, leukaemias,
CC arthritis, inflammatory diseases, cardiovascular diseases, pathogenic
CC diseases, and diabetes. The method provides less antigenic proteins,
CC peptides and polypeptides, which are more effective than prior art. The
CC present sequence represents murine single-chain ZME-018 antibody/G.
CC multiflorum recombinant gelonin (rGel) (scfvMEL/rGel) fusion protein
XX
SQ Sequence 507 AA;

Query Match 100.0%; Score 1287; DB 5; Length 507;
Best Local Similarity 100.0%; Pred. No. 5.3e-125;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

Qy      1 GLDTSVFSTKGATYITYVNFNLRLVRLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60
          |||
Db      257 GLDTSVFSTKGATYITYVNFNLRLVRLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 316

Qy      61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
          |||
Db      317 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 376

Qy      121 AYRETTDLGIEPLRIGIKKL DENAIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
          |||
Db      377 AYRETTDLGIEPLRIGIKKL DENAIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 436

Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
          |||
Db      437 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 496

Qy      241 ALLKFVDKDPK 251
          |||
Db      497 ALLKFVDKDPK 507

```

RESULT 6

AAW29300

ID AAW29300 standard; protein; 293 AA.

XX

AC AAW29300;

XX

DT 20-APR-1998 (first entry)

XX

DE BPI peptide fusion protein pING3797 vector construct protein.

XX

KW Bactericidal/permeability increasing peptide; BPI; fusion protein;

KW bacterial infection; fungal infection; endotoxin; heparin; angiogenesis;

KW fungicidal; recombinant DNA; vector.

XX

OS Synthetic.

OS Pectobacterium carotovorum.

OS Homo sapiens.

OS Chimeric.

XX

PN WO9735009-A1.

XX

PD 25-SEP-1997.

XX

PF 18-MAR-1997; 97WO-US005287.

XX

PR 22-MAR-1996; 96US-00621803.

XX

PA (XOMA) XOMA CORP.

XX

PI Better MD;

XX

DR WPI; 1997-480215/44.

DR N-PSDB; AAT86336.

XX

PT Recombinant production of bactericidal/permeability increasing protein -

PT by expression as a fusion protein in microbial host cells, then cleaving

PT the BPI peptide from the carrier.

XX

PS Example 1; Page 160-161; 186pp; English.

XX

CC A new recombinant DNA vector construct has been developed which encodes a

CC fusion protein and is suitable for introduction into a bacterial host.

CC The vector comprises: (a) DNA encoding at least one cationic

CC bactericidal/permeability increasing peptide (BPI), (b) DNA encoding a

CC carrier protein, and (c) DNA encoding an amino acid (aa) cleavage site

CC located between (a) and (b). The present sequence represents the protein

CC from the pING3797 vector construct which codes for a BPI fusion protein.

CC The peptides have many uses including the treatment of bacterial and

CC fungal infections. BPI peptides also bind to endotoxins and heparin,

CC neutralising their effects. The peptides have further been shown to

CC inhibit angiogenesis (partly due to heparin-binding activity). The fusion

CC proteins have been found to be expressed in large amounts without

CC significant proteolysis, and in some cases are actually secreted from the

CC host cells. This allows the indirect production of anti-microbial BPI

CC peptides in microbial hosts

XX

SQ Sequence 293 AA;

Query Match 99.8%; Score 1284; DB 2; Length 293;

Best Local Similarity 99.6%; Pred. No. 4.9e-125;

Matches 250; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GLDTSVSFSTKGATYITYVNFNLRLVKLKPEGNSHGIPLLRKKCDPGKCFVLVALSNDN 60

|||||

Db 23 GLDTSVSFSTKGATYITYVNFNLRLVKLKPEGNSHGIPLLRKKCDPGKCFVLVALSNDN 82

Qy 61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

|||||

Db 83 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGTYPSPLEGEK 142

Qy 121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180

|||||

Db 143 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 202

```

Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
          |||
Db      203 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 262

Qy      241 ALLKFVDKDPK 251
          |||
Db      263 ALLKFVDKDPK 273

```

RESULT 7

AAW29303

ID AAW29303 standard; protein; 309 AA.

XX

AC AAW29303;

XX

DT 20-APR-1998 (first entry)

XX

DE BPI peptide fusion protein pING3795 vector construct protein.

XX

KW Bactericidal/permeability increasing peptide; BPI; fusion protein;

KW bacterial infection; fungal infection; endotoxin; heparin; angiogenesis;

KW fungicidal; recombinant DNA; vector.

XX

OS Synthetic.

OS Pectobacterium carotovorum.

OS Homo sapiens.

OS Chimeric.

XX

PN W09735009-A1.

XX

PD 25-SEP-1997.

XX

PF 18-MAR-1997; 97WO-US005287.

XX

PR 22-MAR-1996; 96US-00621803.

XX

PA (XOMA) XOMA CORP.

XX

PI Better MD;

XX

DR WPI; 1997-480215/44.

DR N-PSDB; AAT86341.

XX

PT Recombinant production of bactericidal/permeability increasing protein -
PT by expression as a fusion protein in microbial host cells, then cleaving
PT the BPI peptide from the carrier.

XX

PS Example 1; Page 152-153; 186pp; English.

XX

CC A new recombinant DNA vector construct has been developed which encodes a
CC fusion protein and is suitable for introduction into a bacterial host.

CC The vector comprises: (a) DNA encoding at least one cationic

CC bactericidal/permeability increasing peptide (BPI), (b) DNA encoding a

CC carrier protein, and (c) DNA encoding an amino acid (aa) cleavage site

CC located between (a) and (b). The present sequence represents the protein

CC from the pING3795 vector construct which codes for a BPI fusion protein.

CC The peptides have many uses including the treatment of bacterial and

CC fungal infections. BPI peptides also bind to endotoxins and heparin,

CC neutralising their effects. The peptides have further been shown to

CC inhibit angiogenesis (partly due to heparin-binding activity). The fusion

CC proteins have been found to be expressed in large amounts without

CC significant proteolysis, and in some cases are actually secreted from the

CC host cells. This allows the indirect production of anti-microbial BPI

CC peptides in microbial hosts

XX

SQ Sequence 309 AA;

Query Match 99.8%; Score 1284; DB 2; Length 309;

Best Local Similarity 99.6%; Pred. No. 5.3e-125;

Matches 250; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

```

Qy      1 GLDTSVSFSTKGATYITYVNFLNLRVCLKPEGNHSHGIPLLRKKCDPGKCFVLVALSNDN 60
          |||
Db      23 GLDTSVSFSTKGATYITYVNFLNLRVCLKPEGNHSHGIPLLRKKCDPGKCFVLVALSNDN 82

Qy      61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

```

```

      |||
Db      83 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGTYPSELEGK 142
Qy      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
      |||
Db      143 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 202
Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
      |||
Db      203 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 262
Qy      241 ALLKFVDKDPK 251
      |||
Db      263 ALLKFVDKDPK 273

```

RESULT 8

AAW29294

ID AAW29294 standard; protein; 332 AA.

XX

AC AAW29294;

XX

DT 20-APR-1998 (first entry)

XX

DE BPI peptide fusion protein pING3793 vector construct protein.

XX

KW Bactericidal/permeability increasing peptide; BPI; fusion protein;

KW bacterial infection; fungal infection; endotoxin; heparin; angiogenesis;

KW fungicidal; recombinant DNA; vector.

XX

OS Synthetic.

OS Pectobacterium carotovorum.

OS Homo sapiens.

OS Chimeric.

XX

PN W09735009-A1.

XX

PD 25-SEP-1997.

XX

PF 18-MAR-1997; 97WO-US005287.

XX

PR 22-MAR-1996; 96US-00621803.

XX

PA (XOMA) XOMA CORP.

XX

PI Better MD;

XX

DR WPI; 1997-480215/44.

DR N-PSDB; AAT86332.

XX

PT Recombinant production of bactericidal/permeability increasing protein -
PT by expression as a fusion protein in microbial host cells, then cleaving
PT the BPI peptide from the carrier.

XX

PS Example 1; Page 148-150; 186pp; English.

XX

CC A new recombinant DNA vector construct has been developed which encodes a
CC fusion protein and is suitable for introduction into a bacterial host.
CC The vector comprises: (a) DNA encoding at least one cationic
CC bactericidal/permeability increasing peptide (BPI), (b) DNA encoding a
CC carrier protein, and (c) DNA encoding an amino acid (aa) cleavage site
CC located between (a) and (b). The present sequence represents the protein
CC from the pING3793 vector construct which codes for a BPI fusion protein.
CC The peptides have many uses including the treatment of bacterial and
CC fungal infections. BPI peptides also bind to endotoxins and heparin,
CC neutralising their effects. The peptides have further been shown to
CC inhibit angiogenesis (partly due to heparin-binding activity). The fusion
CC proteins have been found to be expressed in large amounts without
CC significant proteolysis, and in some cases are actually secreted from the
CC host cells. This allows the indirect production of anti-microbial BPI
CC peptides in microbial hosts

XX

SQ Sequence 332 AA;

Query Match 99.8%; Score 1284; DB 2; Length 332;

Best Local Similarity 99.6%; Pred. No. 5.9e-125;

Matches 250; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

```

Qy      1 GLDTVSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60
      ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      23 GLDTVSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 82

Qy      61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
      ||||||||||||||||||||||||||||||||||||||||||||:||||||
Db      83 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGTYPSPLEGEK 142

Qy      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
      ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      143 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 202

Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
      ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      203 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 262

Qy      241 ALLKFVDKDPK 251
      ||||||||
Db      263 ALLKFVDKDPK 273

```

RESULT 9

AEC95468

ID AEC95468 standard; protein; 751 AA.

XX

AC AEC95468;

XX

DT 01-DEC-2005 (first entry)

XX

DE Ep-CAM-targeted-modified bouganin VB6-845-gelonin.

XX

KW cytostatic; gene therapy; cytotoxin; immune stimulation; pharmaceutical;

KW colorectal tumor; breast tumor; ovary tumor; pancreas tumor;

KW head & neck tumor; bladder tumor; renal tumor; melanoma;

KW gastrointestinal tumor; prostate tumor; lung tumor;

KW small-cell lung cancer; sarcoma; glioma; lymphoma; neoplasm; bouganin;

KW VB6-845-gelonin.

XX

OS Bougainvillea spectabilis.

OS Synthetic.

XX

PN WO2005090579-A1.

XX

PD 29-SEP-2005.

XX

PF 18-MAR-2005; 2005WO-CA000410.

XX

PR 19-MAR-2004; 2004US-0554580P.

PR 26-NOV-2004; 2004US-0630571P.

XX

PA (BAKE/) BAKER M.

PA (CARR/) CARR F J.

PA (HELL/) HELLENDORN K.

PA (CIZE/) CIZEAU J.

PA (MACD/) MACDONALD G C.

PA (ENTW/) ENTWISTLE J.

PA (BOSC/) BOSC D G.

PA (GLOV/) GLOVER N R.

XX

PI Baker M, Carr FJ, Hellendoorn K, Cizeau J, Macdonald GC;

PI Entwistle J, Bosc DG, Glover NR;

XX

DR WPI; 2005-649604/66.

DR N-PSDB; AEC95467.

XX

PT New modified bouganin protein having reduced propensity to activate an

PT immune response, for treating cancer, e.g. colorectal cancer, breast

PT cancer, ovarian cancer, or head and neck cancer.

XX

PS Example 7; SEQ ID NO 26; 190pp; English.

XX

CC The invention describes a modified bouganin protein, where the modified

CC bouganin has a reduced propensity to activate an immune response. Also

CC described are: a cytotoxin comprising: (a) a targeting group attached to

CC (b) the new modified bouganin protein; or (c) a ligand that binds to a
 CC cancer cell attached to: (d) the modified bouganin protein; a
 CC pharmaceutical composition comprising the cytotoxin and a pharmaceutical
 CC carrier, diluent, or excipient; a process of preparing a pharmaceutical
 CC for treating an animal with cancer; a T-cell epitope comprising a fully
 CC defined 15 amino acid sequence (SEQ ID NO: 2, 3, or 4); and a nucleic
 CC acid molecule encoding the modified bouganin, the cytotoxin, or the T-
 CC cell epitope peptide. Ala-Lys-Val-Asp-Arg-Lys-Asp-Leu-Glu-Leu-Gly-Val-Tyr
 CC -Lys-Leu (epitope region R1, SEQ ID NO: 2) Leu-Gly-Val-Tyr-Lys-leu-Glu-
 CC Phe-Ser-Ile-Glu-Ala-Ile-His-Gly (epitope region R2, SEQ ID NO: 3) Asn-Gly
 CC -Gln-Glu-Ile-Ala-Lys-Phe-Phe-Leu-Ile-Val-Ile-Gln-Met (epitope region R3,
 CC SEQ ID NO: 4). Also disclosed are methods for inhibiting or destroying
 CC cancer cells, and treating cancer. The cytotoxin is useful in the
 CC manufacture of a medicament for inhibiting or destroying a cancer cell or
 CC for treating cancer selected from colorectal cancer, breast cancer,
 CC ovarian cancer, pancreatic cancer, head and neck cancer, bladder cancer,
 CC liver cancer, renal cancer, melanomas, gastrointestinal cancer, prostate
 CC cancer, small cell and non small cell lung cancer, sarcomas, gliomas, or
 CC T- and B-cell lymphomas. The bouganin protein, cytotoxins, compositions,
 CC and methods are useful for treating various forms of the cancer given.
 CC This is the amino acid sequence of a modified Bougainvillea spectabilis
 CC mature bouganin protein.

XX

SQ Sequence 751 AA;

Query Match 99.7%; Score 1283; DB 9; Length 751;
 Best Local Similarity 99.6%; Pred. No. 2.5e-124;
 Matches 250; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 GLDTSVSFSTKGATYITYVNFNLRLVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60
 Db 254 GLDTSVSFSTKGATYITYVNFNLRLVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 313
 Qy 61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
 Db 314 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 373
 Qy 121 AYRETTDLGIEPLRIGIKKL DENAIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
 Db 374 AYRETTDLGIEPLRIGIKKL DENAIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 433
 Qy 181 FQQRIRPANNTISLENKWGKLSFQIRTS GANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
 Db 434 FQQRIRPTNNTISLENKWGKLSFQIRTS GANGMFSEAVELERANGKKYYVTAVDQVKPKI 493
 Qy 241 ALLKFVDKDPK 251
 Db 494 ALLKFVDKDPK 504

RESULT 10

AAR63923

ID AAR63923 standard; protein; 251 AA.

XX

AC AAR63923;

XX

DT 25-MAR-2003 (revised)

DT 27-JUL-1995 (first entry)

XX

DE Type I RIP gelonin analog Gel(C103).

XX

KW Type I ribosome-inactivating proteins; RIPs; gelonin;
 KW cytotoxic therapeutic agents; autoimmune disease; cancer;
 KW graft-versus-host disease.

XX

OS Gelonium multiflorum.

XX

PN W09426910-A1.

XX

PD 24-NOV-1994.

XX

PF 12-MAY-1994; 94WO-US005348.

XX

PR 12-MAY-1993; 93US-00064691.

XX

PA (XOMA) XOMA CORP.

XX
 PI Better MD, Carroll SF, Studnicka GM;
 XX
 DR WPI; 1995-006804/01.
 XX
 PT Polynucleotide(s) encoding type I ribosome-inactivating proteins - which
 PT are suitable for use as components of cytotoxic therapeutic agents.
 XX
 PS Example 3; Page 187-188; 221pp; English.
 XX
 CC AAR63912-R63924 are analogs of AAR63903 type I ribosome-inactivating
 CC protein (RIP) gelonin, one of the nine RIPs described in AAR63903-R63911.
 CC RIPs are key components of cytotoxic therapeutic agents (CTAs), which
 CC include gene fusion products and immunoconjugates. CTAs may be used to
 CC selectively eliminate any cell type to which a RIP component is
 CC targetted, by the specific binding capacity of the second component of
 CC the agent. They can be used in the treatment of diseases where the
 CC elimination of a particular cell type is desired, such as autoimmune
 CC disease, cancer and graft-versus-host disease. (Updated on 25-MAR-2003 to
 CC correct PN field.)
 XX
 SQ Sequence 251 AA;

Query Match 99.6%; Score 1282; DB 2; Length 251;
 Best Local Similarity 99.6%; Pred. No. 6.4e-125;
 Matches 250; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 GLDTSVSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60
 |||||
 Db 1 GLDTSVSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60
 Qy 61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
 |||||
 Db 61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTICKTRLHFGGSYPSLEGEK 120
 Qy 121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
 |||||
 Db 121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
 Qy 181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
 |||||
 Db 181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
 Qy 241 ALLKEFVDKDPK 251
 |||||
 Db 241 ALLKEFVDKDPK 251

RESULT 11

AAR63921
 ID AAR63921 standard; protein; 251 AA.
 XX
 AC AAR63921;
 XX
 DT 25-MAR-2003 (revised)
 DT 27-JUL-1995 (first entry)
 XX
 DE Type I RIP gelonin analog Gel(C10).
 XX
 KW Type I ribosome-inactivating proteins; RIPs; gelonin;
 KW cytotoxic therapeutic agents; autoimmune disease; cancer;
 KW graft-versus-host disease.
 XX
 OS Gelonium multiflorum.
 XX
 PN W09426910-A1.
 XX
 PD 24-NOV-1994.
 XX
 PF 12-MAY-1994; 94WO-US005348.
 XX
 PR 12-MAY-1993; 93US-00064691.
 XX
 PA (XOMA) XOMA CORP.
 XX
 PI Better MD, Carroll SF, Studnicka GM;

XX
 DR WPI; 1995-006804/01.
 XX
 PT Polynucleotide(s) encoding type I ribosome-inactivating proteins - which
 PT are suitable for use as components of cytotoxic therapeutic agents.
 XX
 PS Example 3; Page 186; 221pp; English.
 XX
 CC AAR63912-R63924 are analogs of AAR63903 type I ribosome-inactivating
 CC protein (RIP) gelonin, one of the nine RIPs described in AAR63903-R63911.
 CC RIPs are key components of cytotoxic therapeutic agents (CTAs), which
 CC include gene fusion products and immunoconjugates. CTAs may be used to
 CC selectively eliminate any cell type to which a RIP component is
 CC targetted, by the specific binding capacity of the second component of
 CC the agent. They can be used in the treatment of diseases where the
 CC elimination of a particular cell type is desired, such as autoimmune
 CC disease, cancer and graft-versus-host disease. (Updated on 25-MAR-2003 to
 CC correct PN field.)
 XX
 SQ Sequence 251 AA;

Query Match 99.4%; Score 1279; DB 2; Length 251;
 Best Local Similarity 99.6%; Pred. No. 1.3e-124;
 Matches 250; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```

Qy      1 GLDTVSFSTKGATYITYVNFNLRLVKLKEGNSHGIPLLRKKCDPGKCFVLVALSNDN 60
          |||
Db      1 GLDTVSFSTKGATYITYVNFNLRLVKLKEGNSHGIPLLRKKCDPGKCFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYP SLEGEK 120
          |||
Db     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYP SLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
          |||
Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
          |||
Db    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240

Qy    241 ALLKEFVDKDPK 251
          |||
Db    241 ALLKEFVDKDPK 251

```

RESULT 12

AAR63918

ID AAR63918 standard; protein; 251 AA.

XX

AC AAR63918;

XX

DT 25-MAR-2003 (revised)

DT 27-JUL-1995 (first entry)

XX

DE Type I RIP gelonin analog Gel(C248).

XX

KW Type I ribosome-inactivating proteins; RIPs; gelonin;
 KW cytotoxic therapeutic agents; autoimmune disease; cancer;
 KW graft-versus-host disease.

XX

OS Gelonium multiflorum.

XX

PN W09426910-A1.

XX

PD 24-NOV-1994.

XX

PF 12-MAY-1994; 94WO-US005348.

XX

PR 12-MAY-1993; 93US-00064691.

XX

PA (XOMA) XOMA CORP.

XX

PI Better MD, Carroll SF, Studnicka GM;

XX

DR WPI; 1995-006804/01.

```
XX
PT Polynucleotide(s) encoding type I ribosome-inactivating proteins - which
PT are suitable for use as components of cytotoxic therapeutic agents.
XX
PS Example 3; Page 183-184; 221pp; English.
XX
CC AAR63912-R63924 are analogs of AAR63903 type I ribosome-inactivating
CC protein (RIP) gelonin, one of the nine RIPs described in AAR63903-R63911.
CC RIPs are key components of cytotoxic therapeutic agents (CTAs), which
CC include gene fusion products and immunoconjugates. CTAs may be used to
CC selectively eliminate any cell type to which a RIP component is
CC targetted, by the specific binding capacity of the second component of
CC the agent. They can be used in the treatment of diseases where the
CC elimination of a particular cell type is desired, such as autoimmune
CC disease, cancer and graft-versus-host disease. (Updated on 25-MAR-2003 to
CC correct PN field.)
XX
SQ Sequence 251 AA;
```

Qy	1	GLDTSVSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN	60
Db	1	GLDTSVSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN	60
Qy	61	GQLAEIAIDVTSVYVVGQVQRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK	120
Db	61	GQLAEIAIDVTSVYVVGQVQRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK	120
Qy	121	AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN	180
Db	121	AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN	180
Qy	181	FQQRIRPANNTISLENKWGKLSFQIRTS GANGMFSEAVELERANGKKYYVTAVDQVKPKI	240
Db	181	FQQRIRPANNTISLENKWGKLSFQIRTS GANGMFSEAVELERANGKKYYVTAVDQVKPKI	240
Qy	241	ALLKFVDKDPK	251
Db	241	ALLKFVDCDPK	251

RESULT 13

AAR63920

ID AAR63920 standard; protein; 251 AA.

XX

AC AAR63920;

XX

DT 25-MAR-2003 (revised)

DT 27-JUL-1995 (first entry)

XX

DE Type I RIP gelonin analog Gel(C244).

XX

KW Type I ribosome-inactivating proteins; RIPs; gelonin;

KW cytotoxic therapeutic agents; autoimmune disease; cancer;

KW graft-versus-host disease.

XX

OS *Gelonium multiflorum.*

XX

PN W09426910-A1.

XX

PD 24-NOV-1994.

XX

PF 12-MAY-1994; 94WO-US005348.

XX

PR 12-MAY-1993; 93US-00064691.

XX

PA (XOMA) XOMA CORP.

XX

PI Better MD, Carroll SF, Studnicka GM:

XX

DR WPI; 1995-006804/01.

XX

PT Polynucleotide(s) encoding type I ribosome-inactivating proteins - which

PT are suitable for use as components of cytotoxic therapeutic agents.
 XX
 PS Example 3; Page 185; 221pp; English.
 XX
 CC AAR63912-R63924 are analogs of AAR63903 type I ribosome-inactivating
 CC protein (RIP) gelonin, one of the nine RIPs described in AAR63903-R63911.
 CC RIPs are key components of cytotoxic therapeutic agents (CTAs), which
 CC include gene fusion products and immunoconjugates. CTAs may be used to
 CC selectively eliminate any cell type to which a RIP component is
 CC targetted, by the specific binding capacity of the second component of
 CC the agent. They can be used in the treatment of diseases where the
 CC elimination of a particular cell type is desired, such as autoimmune
 CC disease, cancer and graft-versus-host disease. (Updated on 25-MAR-2003 to
 CC correct PN field.)
 XX
 SQ Séquence 251 AA;

Query Match 99.4%; Score 1279; DB 2; Length 251;
 Best Local Similarity 99.6%; Pred. No. 1.3e-124;
 Matches 250; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy      1 GLDTVSFSTKGATYITYVNFNLRLVVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60
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Db      1 GLDTVSFSTKGATYITYVNFNLRLVVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        |||
Db     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIASSLLVVIQMVSEAAARFTFIENQIRNN 180
        |||
Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIASSLLVVIQMVSEAAARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSYGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
        |||
Db    181 FQQRIRPANNTISLENKWGKLSFQIRTSYGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
        |||
Db    241 ALLCFVDKDPK 251
  
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RESULT 14

AAR63919

ID AAR63919 standard; protein; 251 AA.

XX

AC AAR63919;

XX

DT 25-MAR-2003 (revised)

DT 27-JUL-1995 (first entry)

XX

DE Type I RIP gelonin analog Gel(C239).

XX

KW Type I ribosome-inactivating proteins; RIPs; gelonin;
 KW cytotoxic therapeutic agents; autoimmune disease; cancer;
 KW graft-versus-host disease.

XX

OS Gelonium multiflorum.

XX

PN W09426910-A1.

XX

PD 24-NOV-1994.

XX

PF 12-MAY-1994; 94WO-US005348.

XX

PR 12-MAY-1993; 93US-00064691.

XX

PA (XOMA) XOMA CORP.

XX

PI Better MD, Carroll SF, Studnicka GM;

XX

DR WPI; 1995-006804/01.

XX

PT Polynucleotide(s) encoding type I ribosome-inactivating proteins - which
 PT are suitable for use as components of cytotoxic therapeutic agents.

XX

PS Example 3; Page 184; 221pp; English.
 XX
 CC AAR63912-R63924 are analogs of AAR63903 type I ribosome-inactivating
 CC protein (RIP) gelonin, one of the nine RIPs described in AAR63903-R63911.
 CC RIPs are key components of cytotoxic therapeutic agents (CTAs), which
 CC include gene fusion products and immunoconjugates. CTAs may be used to
 CC selectively eliminate any cell type to which a RIP component is
 CC targetted, by the specific binding capacity of the second component of
 CC the agent. They can be used in the treatment of diseases where the
 CC elimination of a particular cell type is desired, such as autoimmune
 CC disease, cancer and graft-versus-host disease. (Updated on 25-MAR-2003 to
 CC correct PN field.)
 XX
 SQ Sequence 251 AA;

Query Match 99.4%; Score 1279; DB 2; Length 251;
 Best Local Similarity 99.6%; Pred. No. 1.3e-124;
 Matches 250; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 GLDTSVFSTKGATYITYVNFLELRVCLKPEGNSHGIPLLRKKCDPDKCFVLVALSNDN 60
 |||||
 Db 1 GLDTSVFSTKGATYITYVNFLELRVCLKPEGNSHGIPLLRKKCDPDKCFVLVALSNDN 60
 Qy 61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
 |||||
 Db 61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
 Qy 121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
 |||||
 Db 121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
 Qy 181 FQQRIRPANNTISLENKWGKLSFQIRTSANGMFSEAVELERANGKYYVTAVDQVKPKI 240
 |||||
 Db 181 FQQRIRPANNTISLENKWGKLSFQIRTSANGMFSEAVELERANGKYYVTAVDQVKPKI 240
 Qy 241 ALLKFVDKDPK 251
 |||||
 Db 241 ALLKFVDKDPK 251

RESULT 15

AAR63924

ID AAR63924 standard; protein; 251 AA.

XX

AC AAR63924;

XX

DT 25-MAR-2003 (revised)

DT 27-JUL-1995 (first entry)

XX

DE Type I RIP gelonin analog Gel(C184).

XX

KW Type I ribosome-inactivating proteins; RIPs; gelonin;
 KW cytotoxic therapeutic agents; autoimmune disease; cancer;
 KW graft-versus-host disease.

XX

OS Gelonium multiflorum.

XX

PN W09426910-A1.

XX

PD 24-NOV-1994.

XX

PF 12-MAY-1994; 94WO-US005348.

XX

PR 12-MAY-1993; 93US-00064691.

XX

PA (XOMA) XOMA CORP.

XX

PI Better MD, Carroll SF, Studnicka GM;

XX

DR WPI; 1995-006804/01.

XX

PT Polynucleotide(s) encoding type I ribosome-inactivating proteins - which
 PT are suitable for use as components of cytotoxic therapeutic agents.

XX

PS Example 3; Page 188-189; 221pp; English.

XX

CC AAR63912-R63924 are analogs of AAR63903 type I ribosome-inactivating
 CC protein (RIP) gelonin, one of the nine RIPs described in AAR63903-R63911.
 CC RIPs are key components of cytotoxic therapeutic agents (CTAs), which
 CC include gene fusion products and immunoconjugates. CTAs may be used to
 CC selectively eliminate any cell type to which a RIP component is
 CC targetted, by the specific binding capacity of the second component of
 CC the agent. They can be used in the treatment of diseases where the
 CC elimination of a particular cell type is desired, such as autoimmune
 CC disease, cancer and graft-versus-host disease. (Updated on 25-MAR-2003 to
 CC correct PN field.)
 XX

SQ Sequence 251 AA;

Query Match 99.4%; Score 1279; DB 2; Length 251;
 Best Local Similarity 99.6%; Pred. No. 1.3e-124;
 Matches 250; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy      1 GLDTVSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60
        |||
Db      1 GLDTVSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        |||
Db     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
        |||
Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
        |||
Db    181 FQQCIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
        |||
Db    241 ALLKFVDKDPK 251
  
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Search completed: July 20, 2006, 09:43:42
 Job time : 205.301 secs

SCORE 1.3 BuildDate: 12/06/2005

SCORE Search Results Details for Application 10717243 and Search Result us-10-717-243-2.rapbm.

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OM protein - protein search, using sw model

Run on: July 20, 2006, 09:40:12 ; Search time 81.5055 Seconds
(without alignments)
1426.491 Million cell updates/sec

Title: US-10-717-243-2
Perfect score: 1287
Sequence: 1 GLDTVSFSTKGATYITYVNF.....AVDQVKPKIALLKFDKDPK 251

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2097797 seqs, 463214858 residues

Total number of hits satisfying chosen parameters: 2097797

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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1: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US07_PUBCOMB.pep:*
2: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB ID	Description
1	1287	100.0	251	3	US-09-765-527-247
2	1287	100.0	251	4	US-10-127-890-2
3	1287	100.0	251	5	US-10-717-243-2
4	1287	100.0	316	4	US-10-074-596-1
5	1287	100.0	498	5	US-10-964-195-13
6	1287	100.0	507	4	US-10-074-596-11
7	1284	99.8	293	3	US-09-765-527-259
8	1284	99.8	309	3	US-09-765-527-253
9	1284	99.8	332	3	US-09-765-527-251
10	1283	99.7	751	6	US-11-084-080-26
11	1282	99.6	251	4	US-10-127-890-108

12	1282	99.6	251	5	US-10-717-243-108	Sequence 108, App
13	1279	99.4	251	4	US-10-127-890-103	Sequence 103, App
14	1279	99.4	251	4	US-10-127-890-104	Sequence 104, App
15	1279	99.4	251	4	US-10-127-890-105	Sequence 105, App
16	1279	99.4	251	4	US-10-127-890-106	Sequence 106, App
17	1279	99.4	251	4	US-10-127-890-109	Sequence 109, App
18	1279	99.4	251	5	US-10-717-243-103	Sequence 103, App
19	1279	99.4	251	5	US-10-717-243-104	Sequence 104, App
20	1279	99.4	251	5	US-10-717-243-105	Sequence 105, App
21	1279	99.4	251	5	US-10-717-243-106	Sequence 106, App
22	1279	99.4	251	5	US-10-717-243-109	Sequence 109, App
23	1278	99.3	251	4	US-10-127-890-99	Sequence 99, Appl
24	1278	99.3	251	4	US-10-127-890-100	Sequence 100, App
25	1278	99.3	251	4	US-10-127-890-102	Sequence 102, App
26	1278	99.3	251	4	US-10-127-890-107	Sequence 107, App
27	1278	99.3	251	5	US-10-717-243-99	Sequence 99, Appl
28	1278	99.3	251	5	US-10-717-243-100	Sequence 100, App
29	1278	99.3	251	5	US-10-717-243-102	Sequence 102, App
30	1278	99.3	251	5	US-10-717-243-107	Sequence 107, App
31	1269	98.6	251	4	US-10-127-890-101	Sequence 101, App
32	1269	98.6	251	5	US-10-717-243-101	Sequence 101, App
33	1261	98.0	251	4	US-10-127-890-110	Sequence 110, App
34	1261	98.0	251	5	US-10-717-243-110	Sequence 110, App
35	1252	97.3	251	4	US-10-127-890-111	Sequence 111, App
36	1252	97.3	251	5	US-10-717-243-111	Sequence 111, App
37	1219.5	94.8	513	5	US-10-926-731A-12	Sequence 12, Appl
38	1208	93.9	506	5	US-10-964-195-11	Sequence 11, Appl
39	346	26.9	263	4	US-10-127-890-4	Sequence 4, Appli
40	346	26.9	263	5	US-10-717-243-4	Sequence 4, Appli
41	343	26.7	267	4	US-10-282-935-1	Sequence 1, Appli
42	343	26.7	267	4	US-10-127-890-1	Sequence 1, Appli
43	343	26.7	267	4	US-10-440-796-1	Sequence 1, Appli
44	343	26.7	267	5	US-10-717-243-1	Sequence 1, Appli
45	343	26.7	268	6	US-11-010-795-24	Sequence 24, Appl

ALIGNMENTS

RESULT 1

US-09-765-527-247

; Sequence 247, Application US/09765527

; Patent No. US20020006638A1

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; TITLE OF INVENTION: Methods for Recombinant Microbial Production of
Fusion Proteins and BPI-Derived Peptides

; NUMBER OF SEQUENCES: 265

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun

; STREET: 6300 Sears Tower, 233 South Wacker Drive

; CITY: Chicago

; STATE: Illinois

; COUNTRY: United States of America

; ZIP: 60606-6402

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/765,527

; FILING DATE: 18-Jan-2001

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 08/621,803

; FILING DATE:

; ATTORNEY/AGENT INFORMATION:

; NAME: Borun, Michael F.

; REGISTRATION NUMBER: 25,447

; REFERENCE/DOCKET NUMBER: 27129/33199

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 312/474-6300

; TELEFAX: 312/474-0448

; TELEX: 25-3856

; INFORMATION FOR SEQ ID NO: 247:

; SEQUENCE CHARACTERISTICS:

;
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 247:
US-09-765-527-247

Query Match 100.0%; Score 1287; DB 3; Length 251;
Best Local Similarity 100.0%; Pred. No. 7e-117;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 GLDTVSFSTKGATYITYVNFNLRVKLKPEGNSHGIPLLRKKDDPGKCFVLVALSNDN 60
        |||
Db      1 GLDTVSFSTKGATYITYVNFNLRVKLKPEGNSHGIPLLRKKDDPGKCFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVQRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        |||
Db     61 GQLAEIAIDVTSVYVVGQVQRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKLDENADNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
        |||
Db    121 AYRETTDLGIEPLRIGIKKLDENADNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKYYVTAVDQVKPKI 240
        |||
Db    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKYYVTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
        |||
Db    241 ALLKFVDKDPK 251
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RESULT 2

US-10-127-890-2

; Sequence 2, Application US/10127890

; Publication No. US20030166196A1

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; Carroll, Stephen F.

; Studnika, Gary M.

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; Proteins

; NUMBER OF SEQUENCES: 173

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: McAndrews, Held & Malloy, Ltd.

; STREET: 500 West Madison Street, 34th floor

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60661

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/10/127,890

; FILING DATE: 23-Apr-2002

; CLASSIFICATION:

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US/08/646,360

; FILING DATE: 13-MAY-1996

; APPLICATION NUMBER: PCT/US94/05348

; FILING DATE: 12-MAY-1994

; APPLICATION NUMBER: US 08/064,691

; FILING DATE: 12-MAY-1993

; APPLICATION NUMBER: US 07/988,430

; FILING DATE: 09-DEC-1992

; APPLICATION NUMBER: US 07/901,707

; FILING DATE: 19-JUN-1992

; APPLICATION NUMBER: US 07/787,567

; FILING DATE: 04-NOV-1991

; ATTORNEY/AGENT INFORMATION:

; NAME: McNicholas, Janet M.

; REGISTRATION NUMBER: 32,918

; REFERENCE/DOCKET NUMBER: 200-70.P4

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; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 2:
US-10-127-890-2

Query Match          100.0%; Score 1287; DB 4; Length 251;
Best Local Similarity 100.0%; Pred. No. 7e-117;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      1 GLDTSVSFSTKGATYITYVNFNLNLRVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 GLDTSVSFSTKGATYITYVNFNLNLRVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60

Qy      61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180

Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTSANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      181 FQQRIRPANNTISLENKWGKLSFQIRTSANGMFSEAVELERANGKKYYVTAVDQVKPKI 240

Qy      241 ALLKFVDKDPK 251
        ||||||||
Db      241 ALLKFVDKDPK 251

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RESULT 3
US-10-717-243-2
; Sequence 2, Application US/10717243
; Publication No. US20050054835A1
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; Carroll, Stephen F.
; Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; Proteins
; NUMBER OF SEQUENCES: 169
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/717,243
; FILING DATE: 18-Nov-2003
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/839,765
; FILING DATE: 15-APR-1997
; APPLICATION NUMBER: US 08/425,336
; FILING DATE: 18-APR-1995
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992

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; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 11022US09/200-70.P3.C3
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 2:
US-10-717-243-2

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Query Match          100.0%; Score 1287; DB 5; Length 251;
Best Local Similarity 100.0%; Pred. No. 7e-117;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

```

Qy      1 GLDTSVFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDPDKCFVLVALSNDN 60
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 GLDTSVFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDPDKCFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSYGANGMFSEAVELEERANGKKYYVTAVDQVKPKI 240
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 FQQRIRPANNTISLENKWGKLSFQIRTSYGANGMFSEAVELEERANGKKYYVTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
        ||||||||
Db    241 ALLKFVDKDPK 251

```

RESULT 4

```

US-10-074-596-1
; Sequence 1, Application US/10074596
; Publication No. US20030176331A1
; GENERAL INFORMATION:
; APPLICANT: ROSENBLUM, MICHAEL G.
; APPLICANT: CHEUNG, LAWRENCE
; TITLE OF INVENTION: MODIFIED PROTEINS, DESIGNER TOXINS, AND METHODS OF
; TITLE OF INVENTION: MAKING THEEOF
; FILE REFERENCE: CLFR:007US
; CURRENT APPLICATION NUMBER: US/10/074,596
; CURRENT FILING DATE: 2002-02-12
; PRIOR APPLICATION NUMBER: 60/268,402
; PRIOR FILING DATE: 2001-02-12
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 316
; TYPE: PRT
; ORGANISM: Gelonium multiflorum
US-10-074-596-1

```

```

Query Match          100.0%; Score 1287; DB 4; Length 316;
Best Local Similarity 100.0%; Pred. No. 9.6e-117;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

```

Qy      1 GLDTSVFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDPDKCFVLVALSNDN 60
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     47 GLDTSVFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDPDKCFVLVALSNDN 106

Qy     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||

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Db      107  GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 166
Qy      121  AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
          |||
Db      167  AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 226
Qy      181  FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
          |||
Db      227  FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 286
Qy      241  ALLKFVDKDPK 251
          |||
Db      287  ALLKFVDKDPK 297

```

RESULT 5

US-10-964-195-13

; Sequence 13, Application US/10964195

; Publication No. US20050163774A1

; GENERAL INFORMATION:

; APPLICANT: Rosenblum et al.

; TITLE OF INVENTION: Immunotoxins Directed Against c-erbB-2 (HER-2/Neu)

; TITLE OF INVENTION: Related Surface Antigens

; FILE REFERENCE: D5425CIP2

; CURRENT APPLICATION NUMBER: US/10/964,195

; CURRENT FILING DATE: 2004-10-13

; PRIOR APPLICATION NUMBER: US/09/320,156

; PRIOR FILING DATE: 1999-05-26

; PRIOR APPLICATION NUMBER: 08/404,499

; PRIOR FILING DATE: 1995-03-17

; NUMBER OF SEQ ID NOS: 14

; SEQ ID NO 13

; LENGTH: 498

; TYPE: PRT

; ORGANISM: Artificial

; FEATURE:

; OTHER INFORMATION: Polypeptide encoded by the scFv23-gelonin immunotoxin

US-10-964-195-13

```

Query Match      100.0%; Score 1287; DB 5; Length 498;
Best Local Similarity 100.0%; Pred. No. 1.8e-116;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

```

Qy      1  GLDTSVSFSTKGATYITYVNFNLNLRVVKLKEGNSHGIPLLRKKCDPGKCFVLVALSNDN 60
          |||
Db      247  GLDTSVSFSTKGATYITYVNFNLNLRVVKLKEGNSHGIPLLRKKCDPGKCFVLVALSNDN 306
Qy      61  GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
          |||
Db      307  GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 366
Qy      121  AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
          |||
Db      367  AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 426
Qy      181  FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
          |||
Db      427  FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 486
Qy      241  ALLKFVDKDPK 251
          |||
Db      487  ALLKFVDKDPK 497

```

RESULT 6

US-10-074-596-11

; Sequence 11, Application US/10074596

; Publication No. US20030176331A1

; GENERAL INFORMATION:

; APPLICANT: ROSENBLUM, MICHAEL G.

; APPLICANT: CHEUNG, LAWRENCE

; TITLE OF INVENTION: MODIFIED PROTEINS, DESIGNER TOXINS, AND METHODS OF

; TITLE OF INVENTION: MAKING THEEOF

; FILE REFERENCE: CLFR:007US

; CURRENT APPLICATION NUMBER: US/10/074,596

; CURRENT FILING DATE: 2002-02-12

```

; PRIOR APPLICATION NUMBER: 60/268,402
; PRIOR FILING DATE: 2001-02-12
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 11
; LENGTH: 507
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
US-10-074-596-11

```

```

Query Match      100.0%; Score 1287; DB 4; Length 507;
Best Local Similarity 100.0%; Pred. No. 1.8e-116;
Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

```

Qy      1 GLDTVSFSTKGATYITYVNFNLNLRVCLKPEGNHSHGIPLLRKKCDPGKCFVLVALSNDN 60
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      257 GLDTVSFSTKGATYITYVNFNLNLRVCLKPEGNHSHGIPLLRKKCDPGKCFVLVALSNDN 316

Qy      61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      317 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 376

Qy      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      377 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 436

Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTSANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      437 FQQRIRPANNTISLENKWGKLSFQIRTSANGMFSEAVELERANGKKYYVTAVDQVKPKI 496

Qy      241 ALLKFVDKDPK 251
        ||||||||
Db      497 ALLKFVDKDPK 507

```

RESULT 7

US-09-765-527-259

; Sequence 259, Application US/09765527

; Patent No. US20020006638A1

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.
; TITLE OF INVENTION: Methods for Recombinant Microbial Production of
; Fusion Proteins and BPI-Derived Peptides

; NUMBER OF SEQUENCES: 265

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/765,527
; FILING DATE: 18-Jan-2001

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 08/621,803
; FILING DATE:

; ATTORNEY/AGENT INFORMATION:

; NAME: Borun, Michael F.
; REGISTRATION NUMBER: 25,447
; REFERENCE/DOCKET NUMBER: 27129/33199

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856

; INFORMATION FOR SEQ ID NO: 259:

; SEQUENCE CHARACTERISTICS:
; LENGTH: 293 amino acids
; TYPE: amino acid

; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 259:
US-09-765-527-259

Query Match 99.8%; Score 1284; DB 3; Length 293;
Best Local Similarity 99.6%; Pred. No. 1.7e-116;
Matches 250; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

```
Qy      1 GLDTVSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60
          |||
Db      23 GLDTVSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 82

Qy      61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
          |||
Db      83 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGTYPSELEGEK 142

Qy     121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
          |||
Db     143 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 202

Qy     181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
          |||
Db     203 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 262

Qy     241 ALLKFVDKDPK 251
          |||
Db     263 ALLKFVDKDPK 273
```

RESULT 8

US-09-765-527-253

; Sequence 253, Application US/09765527

; Patent No. US20020006638A1

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; TITLE OF INVENTION: Methods for Recombinant Microbial Production of
; Fusion Proteins and BPI-Derived Peptides

; NUMBER OF SEQUENCES: 265

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun

; STREET: 6300 Sears Tower, 233 South Wacker Drive

; CITY: Chicago

; STATE: Illinois

; COUNTRY: United States of America

; ZIP: 60606-6402

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/765,527

; FILING DATE: 18-Jan-2001

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 08/621,803

; FILING DATE:

; ATTORNEY/AGENT INFORMATION:

; NAME: Borun, Michael F.

; REGISTRATION NUMBER: 25,447

; REFERENCE/DOCKET NUMBER: 27129/33199

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 312/474-6300

; TELEFAX: 312/474-0448

; TELEX: 25-3856

; INFORMATION FOR SEQ ID NO: 253:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 309 amino acids

; TYPE: amino acid

; TOPOLOGY: linear

; MOLECULE TYPE: protein

; SEQUENCE DESCRIPTION: SEQ ID NO: 253:

US-09-765-527-253

Query Match 99.8%; Score 1284; DB 3; Length 309;
Best Local Similarity 99.6%; Pred. No. 1.8e-116;


```

Matches 250; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy      1 GLDTSVSFSTKGATYITYVNFNLNLRVCLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      23 GLDTSVSFSTKGATYITYVNFNLNLRVCLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 82

Qy      61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      83 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGTYPSLEGEK 142

Qy      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      143 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 202

Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKYYVTAVDQVKPKI 240
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      203 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKYYVTAVDQVKPKI 262

Qy      241 ALLKFVDKDPK 251
        ||||||||
Db      263 ALLKFVDKDPK 273

```

RESULT 9

US-09-765-527-251

; Sequence 251, Application US/09765527

; Patent No. US20020006638A1

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; TITLE OF INVENTION: Methods for Recombinant Microbial Production of
Fusion Proteins and BPI-Derived Peptides .

; NUMBER OF SEQUENCES: 265

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun

; STREET: 6300 Sears Tower, 233 South Wacker Drive

; CITY: Chicago

; STATE: Illinois

; COUNTRY: United States of America

; ZIP: 60606-6402

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/765,527

; FILING DATE: 18-Jan-2001

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 08/621,803

; FILING DATE:

; ATTORNEY/AGENT INFORMATION:

; NAME: Borun, Michael F.

; REGISTRATION NUMBER: 25,447

; REFERENCE/DOCKET NUMBER: 27129/33199

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 312/474-6300

; TELEFAX: 312/474-0448

; TELEX: 25-3856

; INFORMATION FOR SEQ ID NO: 251:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 332 amino acids

; TYPE: amino acid

; TOPOLOGY: linear

; MOLECULE TYPE: protein

; SEQUENCE DESCRIPTION: SEQ ID NO: 251:

US-09-765-527-251

Query Match 99.8%; Score 1284; DB 3; Length 332;

Best Local Similarity 99.6%; Pred. No. 2e-116;

Matches 250; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

```

Qy      1 GLDTSVSFSTKGATYITYVNFNLNLRVCLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      23 GLDTSVSFSTKGATYITYVNFNLNLRVCLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 82

Qy      61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

```

```

Db      83 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGTPSLEGEK 142
Qy      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
Db      143 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 202
Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
Db      203 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 262
Qy      241 ALLKFVDKDPK 251
Db      263 ALLKFVDKDPK 273

```

RESULT 10

```

US-11-084-080-26
; Sequence 26, Application US/11084080
; Publication No. US20050238642A1
; GENERAL INFORMATION:
; APPLICANT: BAKER, Matthew
; APPLICANT: CARR, Francis J.
; APPLICANT: HELLENDORRN, Koen
; APPLICANT: CIZEAU, Jeannick
; APPLICANT: MACDONALD, Glen Christopher
; APPLICANT: ENTWISTLE, Joycelyn
; APPLICANT: BOSC, Denis Georges
; APPLICANT: GLOVER, Nicholas Ronald
; TITLE OF INVENTION: MODIFIED BOUGANIN PROTEINS, CYTOTOXINS AND METHODS AND USES
; TITLE OF INVENTION: THEREOF
; FILE REFERENCE: 10241-44
; CURRENT APPLICATION NUMBER: US/11/084,080
; CURRENT FILING DATE: 2005-03-18
; PRIOR APPLICATION NUMBER: US 60/554,580
; PRIOR FILING DATE: 2004-03-19
; PRIOR APPLICATION NUMBER: US 60/630,571
; PRIOR FILING DATE: 2004-11-26
; NUMBER OF SEQ ID NOS: 129
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 26
; LENGTH: 751
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: VB6-845-gelonin
US-11-084-080-26

```

```

Query Match      99.7%; Score 1283; DB 6; Length 751;
Best Local Similarity 99.6%; Pred. No. 7.8e-116;
Matches 250; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```

```

Qy      1 GLDTSVSFSTKGATYITYVNFNLNLRVVKLKEGNSHGIPLLRKKCDGPKCFVLVALSNDN 60
Db      254 GLDTSVSFSTKGATYITYVNFNLNLRVVKLKEGNSHGIPLLRKKCDGPKCFVLVALSNDN 313
Qy      61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
Db      314 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 373
Qy      121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
Db      374 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 433
Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
Db      434 FQQRIRPTNNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 493
Qy      241 ALLKFVDKDPK 251
Db      494 ALLKFVDKDPK 504

```

RESULT 11

```

US-10-127-890-108
; Sequence 108, Application US/10127890

```

```

; Publication No. US20030166196A1
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; Carroll, Stephen F.
; Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; Proteins
; NUMBER OF SEQUENCES: 173
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/127,890
; FILING DATE: 23-Apr-2002
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/646,360
; FILING DATE: 13-MAY-1996
; APPLICATION NUMBER: PCT/US94/05348
; FILING DATE: 12-MAY-1994
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 200-70.P4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 108:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 251 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 108:
US-10-127-890-108

```

```

Query Match          99.6%; Score 1282; DB 4; Length 251;
Best Local Similarity 99.6%; Pred. No. 2.1e-116;
Matches 250; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```

```

Qy      1 GLDTVSFSTKGATYITYVNFNLNLRVCLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60
        |||
Db      1 GLDTVSFSTKGATYITYVNFNLNLRVCLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        |||
Db     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTCKTRLHFGGSYPSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKL DENAIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
        |||
Db    121 AYRETTDLGIEPLRIGIKKL DENAIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTS GANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
        |||
Db    181 FQQRIRPANNTISLENKWGKLSFQIRTS GANGMFSEAVELERANGKKYYVTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
        |||

```

Db 241 ALLKFVDKDPK 251

RESULT 12

US-10-717-243-108

; Sequence 108, Application US/10717243

; Publication No. US20050054835A1

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; Carroll, Stephen F.

; Studnika, Gary M.

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; Proteins

; NUMBER OF SEQUENCES: 169

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: McAndrews, Held & Malloy, Ltd.

; STREET: 500 West Madison Street, 34th floor

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60661

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/10/717,243

; FILING DATE: 18-Nov-2003

; CLASSIFICATION: 530

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US/08/839,765

; FILING DATE: 15-APR-1997

; APPLICATION NUMBER: US 08/425,336

; FILING DATE: 18-APR-1995

; APPLICATION NUMBER: US 08/064,691

; FILING DATE: 12-MAY-1993

; APPLICATION NUMBER: US 07/988,430

; FILING DATE: 09-DEC-1992

; APPLICATION NUMBER: US 07/901,707

; FILING DATE: 19-JUN-1992

; APPLICATION NUMBER: US 07/787,567

; FILING DATE: 04-NOV-1991

; ATTORNEY/AGENT INFORMATION:

; NAME: McNicholas, Janet M.

; REGISTRATION NUMBER: 32,918

; REFERENCE/DOCKET NUMBER: 11022US09/200-70.P3.C3

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 312/707-8889

; TELEFAX: 312/707-9155

; TELEX: 650 388-1248

; INFORMATION FOR SEQ ID NO: 108:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 251 amino acids

; TYPE: amino acid

; TOPOLOGY: linear

; MOLECULE TYPE: protein

; SEQUENCE DESCRIPTION: SEQ ID NO: 108:

US-10-717-243-108

Query Match 99.6%; Score 1282; DB 5; Length 251;

Best Local Similarity 99.6%; Pred. No. 2.1e-116;

Matches 250; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy      1 GLDTSVSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60
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Db      1 GLDTSVSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
         |||
Db     61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTCKTRLHFGGSYPSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKL DENAIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
         |||
Db    121 AYRETTDLGIEPLRIGIKKL DENAIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNN 180
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Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTS GANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
        |||
Db      181 FQQRIRPANNTISLENKWGKLSFQIRTS GANGMFSEAVELERANGKKYYVTAVDQVKPKI 240

Qy      241 ALLKFVDKDPK 251
        |||
Db      241 ALLKFVDKDPK 251

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RESULT 13

US-10-127-890-103

; Sequence 103, Application US/10127890

; Publication No. US20030166196A1

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; Carroll, Stephen F.

; Studnika, Gary M.

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating

; Proteins

; NUMBER OF SEQUENCES: 173

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: McAndrews, Held & Malloy, Ltd.

; STREET: 500 West Madison Street, 34th floor

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60661

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/10/127,890

; FILING DATE: 23-Apr-2002

; CLASSIFICATION:

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US/08/646,360

; FILING DATE: 13-MAY-1996

; APPLICATION NUMBER: PCT/US94/05348

; FILING DATE: 12-MAY-1994

; APPLICATION NUMBER: US 08/064,691

; FILING DATE: 12-MAY-1993

; APPLICATION NUMBER: US 07/988,430

; FILING DATE: 09-DEC-1992

; APPLICATION NUMBER: US 07/901,707

; FILING DATE: 19-JUN-1992

; APPLICATION NUMBER: US 07/787,567

; FILING DATE: 04-NOV-1991

; ATTORNEY/AGENT INFORMATION:

; NAME: McNicholas, Janet M.

; REGISTRATION NUMBER: 32,918

; REFERENCE/DOCKET NUMBER: 200-70.P4

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 312/707-8889

; TELEFAX: 312/707-9155

; TELEX: 650 388-1248

; INFORMATION FOR SEQ ID NO: 103:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 251 amino acids

; TYPE: amino acid

; TOPOLOGY: linear

; MOLECULE TYPE: protein

; SEQUENCE DESCRIPTION: SEQ ID NO: 103:

US-10-127-890-103

Query Match 99.4%; Score 1279; DB 4; Length 251;

Best Local Similarity 99.6%; Pred. No. 4.2e-116;

Matches 250; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy      1 GLD TVSFSTKGATYITYVNF LNELRVKLKPEGNSHG IPLL RKKCD DPGKCFVLVALSNDN 60
        |||
Db      1 GLD TVSFSTKGATYITYVNF LNELRVKLKPEGNSHG IPLL RKKCD DPGKCFVLVALSNDN 60

Qy      61 GQLAEIAIDVTSVYVVG YQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        |||

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Db      61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFSGSYPSLEGEK 120
Qy      121 AYRETTDLGIEPLRIGIKKLDENAIKNYKPTFIASSLLVVIQMVSEARFTFIENQIRNN 180
        |||
Db      121 AYRETTDLGIEPLRIGIKKLDENAIKNYKPTFIASSLLVVIQMVSEARFTFIENQIRNN 180
Qy      181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
        |||
Db      181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
Qy      241 ALLKFVDKDPK 251
        |||
Db      241 ALLKFVDCDPK 251

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RESULT 14

US-10-127-890-104

; Sequence 104, Application US/10127890

; Publication No. US20030166196A1.

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; Carroll, Stephen F.

; Studnika, Gary M.

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; Proteins

; NUMBER OF SEQUENCES: 173

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: McAndrews, Held & Malloy, Ltd.

; STREET: 500 West Madison Street, 34th floor

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60661

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/10/127,890

; FILING DATE: 23-Apr-2002

; CLASSIFICATION:

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US/08/646,360

; FILING DATE: 13-MAY-1996

; APPLICATION NUMBER: PCT/US94/05348

; FILING DATE: 12-MAY-1994

; APPLICATION NUMBER: US 08/064,691

; FILING DATE: 12-MAY-1993

; APPLICATION NUMBER: US 07/988,430

; FILING DATE: 09-DEC-1992

; APPLICATION NUMBER: US 07/901,707

; FILING DATE: 19-JUN-1992

; APPLICATION NUMBER: US 07/787,567

; FILING DATE: 04-NOV-1991

; ATTORNEY/AGENT INFORMATION:

; NAME: McNicholas, Janet M.

; REGISTRATION NUMBER: 32,918

; REFERENCE/DOCKET NUMBER: 200-70.P4

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 312/707-8889

; TELEFAX: 312/707-9155

; TELEX: 650 388-1248

; INFORMATION FOR SEQ ID NO: 104:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 251 amino acids

; TYPE: amino acid

; TOPOLOGY: linear

; MOLECULE TYPE: protein

; SEQUENCE DESCRIPTION: SEQ ID NO: 104:

US-10-127-890-104

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Query Match          99.4%;  Score 1279;  DB 4;  Length 251;
Best Local Similarity 99.6%;  Pred. No. 4.2e-116;
Matches 250;  Conservative 0;  Mismatches 1;  Indels 0;  Gaps 0;

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Qy      1 GLDTSVSFSTKGATYITYVNFLNELRVKLPKPEGNHSHGIPLLRKKCDPDKCFVLVALSNDN 60
        |||
Db      1 GLDTSVSFSTKGATYITYVNFLNELRVKLPKPEGNHSHGIPLLRKKCDPDKCFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDPDAAAYEGLFKNTIKTRLHFSGGSYPSLEGEK 120
        |||
Db     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDPDAAAYEGLFKNTIKTRLHFSGGSYPSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIASSLLVVIQMVSEAAARFTFIENQIRNN 180
        |||
Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIASSLLVVIQMVSEAAARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSANGMFSEAVELEERANGKKYYVTAVDQVKPKI 240
        |||
Db    181 FQQRIRPANNTISLENKWGKLSFQIRTSANGMFSEAVELEERANGKKYYVTAVDQVKPCI 240

Qy    241 ALLKFVDKDPK 251
        |||
Db    241 ALLKFVDKDPK 251

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RESULT 15

US-10-127-890-105

; Sequence 105, Application US/10127890

; Publication No. US20030166196A1

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; Carroll, Stephen F.

; Studnika, Gary M.

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; Proteins

; NUMBER OF SEQUENCES: 173

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: McAndrews, Held & Malloy, Ltd.

; STREET: 500 West Madison Street, 34th floor

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60661

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/10/127,890

; FILING DATE: 23-Apr-2002

; CLASSIFICATION:

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US/08/646,360

; FILING DATE: 13-MAY-1996

; APPLICATION NUMBER: PCT/US94/05348

; FILING DATE: 12-MAY-1994

; APPLICATION NUMBER: US 08/064,691

; FILING DATE: 12-MAY-1993

; APPLICATION NUMBER: US 07/988,430

; FILING DATE: 09-DEC-1992

; APPLICATION NUMBER: US 07/901,707

; FILING DATE: 19-JUN-1992

; APPLICATION NUMBER: US 07/787,567

; FILING DATE: 04-NOV-1991

; ATTORNEY/AGENT INFORMATION:

; NAME: McNicholas, Janet M.

; REGISTRATION NUMBER: 32,918

; REFERENCE/DOCKET NUMBER: 200-70.P4

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 312/707-8889

; TELEFAX: 312/707-9155

; TELEX: 650 388-1248

; INFORMATION FOR SEQ ID NO: 105:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 251 amino acids

; TYPE: amino acid

; TOPOLOGY: linear

; MOLECULE TYPE: protein

; SEQUENCE DESCRIPTION: SEQ ID NO: 105:

US-10-127-890-105

Query Match 99.4%; Score 1279; DB 4; Length 251;
Best Local Similarity 99.6%; Pred. No. 4.2e-116;
Matches 250; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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        |||
Db      1 GLDTVSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDDPGKCFVLVALSNDN 60

Qy     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
        |||
Db     61 GQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120

Qy    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180
        |||
Db    121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIENQIRNN 180

Qy    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
        |||
Db    181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240

Qy    241 ALLKFVDKDPK 251
        |||
Db    241 ALLCFVDKDPK 251
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Search completed: July 20, 2006, 09:43:17
Job time : 82.5055 secs

SCORE 1.3 BuildDate: 12/06/2005

SCORE Search Results Details for Application 10717243 and Search Result us-10-717-243-2.rapbn.

[Score Home](#) [Retrieve Application](#) [SCORE System](#) [SCORE](#) [Comments /](#)
[Page](#) [List](#) [Overview](#) [FAQ](#) [Suggestions](#)

This page gives you Search Results detail for the Application 10717243 and Search Result us-10-717-243-2.rapbn.

[start](#)

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OM protein - protein search, using sw model

Run on: July 20, 2006, 09:40:39 ; Search time 14.8192 Seconds
(without alignments)
976.754 Million cell updates/sec

Title: US-10-717-243-2
Perfect score: 1287
Sequence: 1 GLDTVSFSTKGATYITYVNF.....AVDQVKPKIALLKFDKDPK 251

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 208217 seqs, 57668156 residues

Total number of hits satisfying chosen parameters: 208217

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_AA_New:*
1: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
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3: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US07_NEW_PUB.pep:*
4: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US08_NEW_PUB.pep:*
5: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*
6: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
7: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US11_NEW_PUB.pep:*
8: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US60_NEW_PUB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	343	26.7	267	7	US-11-263-537-1	Sequence 1, Appli
2	314	24.4	251	7	US-11-263-537-3	Sequence 3, Appli
3	124.5	9.7	282	6	US-10-449-902-56587	Sequence 56587, A
4	110.5	8.6	277	6	US-10-953-349-30545	Sequence 30545, A
5	110.5	8.6	277	7	US-11-056-355B-61236	Sequence 61236, A
6	110.5	8.6	281	6	US-10-953-349-30544	Sequence 30544, A
7	110.5	8.6	281	7	US-11-056-355B-61235	Sequence 61235, A
8	110.5	8.6	298	6	US-10-953-349-30543	Sequence 30543, A
9	110.5	8.6	298	7	US-11-056-355B-61234	Sequence 61234, A

10	108	8.4	298	6	US-10-449-902-39064	Sequence 39064, A
11	102.5	8.0	232	6	US-10-953-349-10528	Sequence 10528, A
12	102.5	8.0	245	6	US-10-953-349-10527	Sequence 10527, A
13	102.5	8.0	252	6	US-10-953-349-10526	Sequence 10526, A
14	91	7.1	876	6	US-10-471-571A-5500	Sequence 5500, Ap
15	88.5	6.9	239	6	US-10-953-349-14022	Sequence 14022, A
16	88.5	6.9	239	7	US-11-056-355B-55899	Sequence 55899, A
17	88.5	6.9	248	6	US-10-953-349-14021	Sequence 14021, A
18	88.5	6.9	248	7	US-11-056-355B-55898	Sequence 55898, A
19	88.5	6.9	254	6	US-10-953-349-14020	Sequence 14020, A
20	88.5	6.9	254	7	US-11-056-355B-55897	Sequence 55897, A
21	87	6.8	767	6	US-10-449-902-56749	Sequence 56749, A
22	86.5	6.7	296	6	US-10-449-902-41985	Sequence 41985, A
23	85	6.6	642	6	US-10-449-902-54461	Sequence 54461, A
24	82.5	6.4	278	7	US-11-056-355B-3125	Sequence 3125, Ap
25	82.5	6.4	342	6	US-10-471-571A-1372	Sequence 1372, Ap
26	82.5	6.4	388	6	US-10-953-349-20990	Sequence 20990, A
27	82.5	6.4	388	7	US-11-056-355B-53616	Sequence 53616, A
28	82.5	6.4	433	6	US-10-953-349-20989	Sequence 20989, A
29	82.5	6.4	433	7	US-11-056-355B-53615	Sequence 53615, A
30	82.5	6.4	450	6	US-10-953-349-20988	Sequence 20988, A
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32	82.5	6.4	1183	6	US-10-471-571A-3398	Sequence 3398, Ap
33	82	6.4	291	6	US-10-449-902-37995	Sequence 37995, A
34	81.5	6.3	552	7	US-11-233-089-24	Sequence 24, Appl
35	81.5	6.3	763	6	US-10-449-902-43163	Sequence 43163, A
36	80.5	6.3	219	6	US-10-953-349-5981	Sequence 5981, Ap
37	80.5	6.3	219	7	US-11-056-355B-23415	Sequence 23415, A
38	80.5	6.3	219	7	US-11-056-355B-24652	Sequence 24652, A
39	80.5	6.3	219	7	US-11-056-355B-28637	Sequence 28637, A
40	80.5	6.3	219	7	US-11-056-355B-32227	Sequence 32227, A
41	80.5	6.3	219	7	US-11-056-355B-40030	Sequence 40030, A
42	80.5	6.3	219	7	US-11-056-355B-100712	Sequence 100712, A
43	80.5	6.3	219	7	US-11-056-355B-111951	Sequence 111951, A
44	80.5	6.3	260	6	US-10-953-349-5980	Sequence 5980, Ap
45	80.5	6.3	260	7	US-11-056-355B-23414	Sequence 23414, A

ALIGNMENTS

RESULT 1

US-11-263-537-1

```
; Sequence 1, Application US/11263537
; Publication No. US20060100135A1
; GENERAL INFORMATION:
; APPLICANT: VITETTA, ELLEN S.
; APPLICANT: GHETIE, VICTOR F.
; APPLICANT: SMALLSHAW, JOAN
; APPLICANT: BALUNA, ROXANA G.
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODIFYING TOXIC EFFECTS OF
; TITLE OF INVENTION: PROTEINACEOUS COMPOUNDS
; FILE REFERENCE: UTSD:884USC1
; CURRENT APPLICATION NUMBER: US/11/263,537
; CURRENT FILING DATE: 2005-10-31
; PRIOR APPLICATION NUMBER: 10/282,935
; PRIOR FILING DATE: 2002-10-29
; PRIOR APPLICATION NUMBER: 09/538,873
; PRIOR FILING DATE: 2000-03-30
; PRIOR APPLICATION NUMBER: 60/126,826
; PRIOR FILING DATE: 1999-03-30
; NUMBER OF SEQ ID NOS: 23
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 267
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: Peptide
US-11-263-537-1
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Query Match 26.7%; Score 343; DB 7; Length 267;
 Best Local Similarity 36.8%; Pred. No. 2.8e-23;
 Matches 93; Conservative 45; Mismatches 99; Indels 16; Gaps 9;

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Qy      5 VSFSTKGATYITYVNFNLRLVRLKPEGN-SHGIPLLRKKCDDB-GKCFVLVALSNDNGQ 62
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Db      9 INFTTAGATVQSYTNFIRAVRGRLLTGADVRHEIPVLPNRVGLPINQRFILVELSNHAEL 68

Qy      63 LAEIAIDVTSVYVVGQVRNRSYFFKDAPD-----AAYEGLFKNTIKTR--LHFGGSYPS 115
      :|:|:|: ||||: | :||| || | || : :| |||:|
Db      69 SVTLALDVTNAYVVGYRAGNSAYFFH--PDNQEDAEATHLFTD-VQNRYTFAFGGNYDR 125

Qy      116 LEGEKA-YRETTDLGIEPLRIGIKKLDENAIIDNYKPTIEASSLLVVIQMVSEARFTFIE 174
      || || :|| || | | : :| | :| ||:| |||| :||
Db      126 LEQLAGNLRNIELGNGLPEEAISALYYSTGGTQLPTLARSFIICIQMISEAARFQYIE 185

Qy      175 NQIRN--NFQQRIRPANNTISLENKWGKLSFQIRTSANGMFSEAVELERANGKYYVTA 232
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Db      186 GEMRTRIRYNRRSAPDPSVITLENSWGRSLTAIQESN-QGAFASPIQLQRRNGSKFSVYD 244

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Db      245 VSILIPIIALMVY 257

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RESULT 2

US-11-263-537-3

; Sequence 3, Application US/11263537

; Publication No. US20060100135A1

; GENERAL INFORMATION:

; APPLICANT: VITETTA, ELLEN S.

; APPLICANT: GHETIE, VICTOR F.

; APPLICANT: SMALLSHAW, JOAN

; APPLICANT: BALUNA, ROXANA G.

; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODIFYING TOXIC EFFECTS OF

; TITLE OF INVENTION: PROTEINACEOUS COMPOUNDS

; FILE REFERENCE: UTSD:884USC1

; CURRENT APPLICATION NUMBER: US/11/263,537

; CURRENT FILING DATE: 2005-10-31

; PRIOR APPLICATION NUMBER: 10/282,935

; PRIOR FILING DATE: 2002-10-29

; PRIOR APPLICATION NUMBER: 09/538,873

; PRIOR FILING DATE: 2000-03-30

; PRIOR APPLICATION NUMBER: 60/126,826

; PRIOR FILING DATE: 1999-03-30

; NUMBER OF SEQ ID NOS: 23

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 3

; LENGTH: 251

; TYPE: PRT

; ORGANISM: Abrus precatorius

US-11-263-537-3

Query Match 24.4%; Score 314; DB 7; Length 251;
 Best Local Similarity 35.3%; Pred. No. 1e-20;
 Matches 90; Conservative 39; Mismatches 108; Indels 18; Gaps 8;

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Qy      5 VSFSTKGATYITYVNFNLRLVRLKPEGN-SHGIPLLRKKCDDBPGKC-----FVLVALSND 59
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Db      5 IKFSTEGATSQSYKQFIEALRERLR-GGLIHDIPVL----PDPTTLQERNRYITVELSNS 59

Qy      60 NGQLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLE-G 118
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Db      60 DTESIEVGIDVTNAYVVAYRAGTQSYFLRCDAPSSASDYLTGTDQHSPLFFYGTYGDLERW 119

Qy      119 EKAYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIEASSLLVVIQMVSEARFTFIENQIR 178
      | : ||:| | || || | | :|:|:| ||| :| | :|
Db      120 AHQSRQQIPLGLQALTHGISFFRSGGNDN---EEKARTLIVIQMVAARFRYISNRVR 176

Qy      179 NNFQ--QRIRPANNTISLENKWGKLSFQIRTSANGMFSEAVELERANGKYYVTAVDQ- 235
      : | :| :| |||| | || : :| | || : | : :
Db      177 VSIQTGTAFQPDAAAMISLENNWDNLSRGVQES-VQDTFPNQVTLTNIRNEPVIVDLSLHP 235

Qy      236 VKPKIALLLKFVDKDP 250
      :||: || |
Db      236 TVAVLALMLFVCNPP 250

```

RESULT 3

US-10-449-902-56587

```
; Sequence 56587, Application US/10449902
; Publication No. US20060123505A1
; GENERAL INFORMATION:
; APPLICANT: National Institute of Agrobiological Sciences.
; APPLICANT: Bio-oriented Technology Research Advancement Institution.
; APPLICANT: The Institute of Physical and Chemical Research.
; APPLICANT: Foundation for Advancement of International Science.
; TITLE OF INVENTION: FULL-LENGTH PLANT cDNA AND USES THEREOF
; FILE REFERENCE: MOA-A0205Y1-US
; CURRENT APPLICATION NUMBER: US/10/449,902
; CURRENT FILING DATE: 2003-05-29
; PRIOR APPLICATION NUMBER: JP 2002-203269
; PRIOR FILING DATE: 2002-05-30
; PRIOR APPLICATION NUMBER: JP 2002-383870
; PRIOR FILING DATE: 2002-12-11
; NUMBER OF SEQ ID NOS: 56791
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 56587
; LENGTH: 282
; TYPE: PRT
; ORGANISM: Oryza sativa
US-10-449-902-56587
```

```

RESULT 4
US-10-953-349-30545
; Sequence 30545, Application US/10953349
; Publication No. US20060107345A1
; GENERAL INFORMATION:
; APPLICANT: ALEXANDROV, Nickolai et al.
; TITLE OF INVENTION: SEQUENCE-DETERMINED DNA FRAGMENTS AND CORRESPONDING POLYPEPTIDES
; TITLE OF INVENTION: ENCODED THERBY
; FILE REFERENCE: 2750-1579PUS2
; CURRENT APPLICATION NUMBER: US/10/953,349
; CURRENT FILING DATE: 2004-09-30
; NUMBER OF SEQ ID NOS: 40252
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 30545
; LENGTH: 277
; TYPE: PRT
; ORGANISM: Triticum aestivum
US-10-953-349-30545

```


; CURRENT FILING DATE: 2004-09-30
; NUMBER OF SEQ ID NOS: 40252
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 30544
; LENGTH: 281
; TYPE: PRT
; ORGANISM: Triticum aestivum
US-10-953-349-30544

Query Match 8.6%; Score 110.5; DB 6; Length 281;
Best Local Similarity 21.9%; Pred. No. 0.022;
Matches 59; Conservative 49; Mismatches 116; Indels 45; Gaps 11;

```
Qy      2 LDTVSFSTKGATYITYVNFNLRLVKLK-PEGNSHGIPLLR--KKCDDPGKCFVLVALSN 58
      | | : | : | : | | : | | : | : | | : | : | : | : | : | : | : |
Db      13 LFTATFNVQ-ASSTDYVTFITGIRNKLNRPGQSSHNRPVLPPIEPNVPPSRWFHIVLKTS 71

Qy      59 DNGQLAEIAIDVTSVYVVGQVVRNRSYFFKD---APDAAYEGLFKNTIKTRLHFGGSYPS 115
      : | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
Db      72 PANTGLTLATRADNLYWEGFKSSDGTWELTPGLIPGATYVG-----FGGTYRD 120

Qy      116 LEGEKAYRETTDLGIEPLRIGIKKL----DENAIDNYKPTIEASSLLVVIQMVSEARFT 171
      | | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
Db      121 LLGDTDKLTNVALGRQQMADAVTALHGRTKADKTS GPKQQQAREAVTTLLLMVHEATRFQ 180

Qy      172 FIENQIRNNFQQRIRPANNTISLENKWGKLSFQIRTS GANGM--FSEAV---ELERANGK 226
      : : : : : : : | | : | : | : | : | : | : | : | : | : |
Db      181 TVSGFVAGLLHPK-----TVEKKS G KISNELKAQ-VNGWQDLSEALLKTDKPPAGK 231

Qy      227 -----KYYVTAVDQVKPKIALLKFV 246
      | | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
Db      232 PPAKFTPIEKMGVRTAEQAAATLGILLFV 260
```

RESULT 7

US-11-056-355B-61235

; Sequence 61235, Application US/11056355B

; Publication No. US20060150283A1

; GENERAL INFORMATION:

; APPLICANT: Brover, Vyacheslav

; APPLICANT: Alexandrov, Nickolai

; TITLE OF INVENTION: Sequence Determined DNA Fragments and Corresponding

; TITLE OF INVENTION: Polypeptides Encoded Thereby

; FILE REFERENCE: 2750-1590PUS2

; CURRENT APPLICATION NUMBER: US/11/056,355B

; CURRENT FILING DATE: 2005-02-14

; PRIOR APPLICATION NUMBER: 60/544,190

; PRIOR FILING DATE: 2004-02-13

; NUMBER OF SEQ ID NOS: 119966

; SEQ ID NO 61235

; LENGTH: 281

; TYPE: prt

; ORGANISM: Triticum aestivum

; FEATURE:

; NAME/KEY: peptide

; LOCATION: (1)..(281)

; OTHER INFORMATION: Ceres Seq. ID no. 13661989

US-11-056-355B-61235

Query Match 8.6%; Score 110.5; DB 7; Length 281;
Best Local Similarity 21.9%; Pred. No. 0.022;
Matches 59; Conservative 49; Mismatches 116; Indels 45; Gaps 11;

```
Qy      2 LDTVSFSTKGATYITYVNFNLRLVKLK-PEGNSHGIPLLR--KKCDDPGKCFVLVALSN 58
      | | : | : | : | | : | | : | : | | : | : | : | : | : | : | : |
Db      13 LFTATFNVQ-ASSTDYVTFITGIRNKLNRPGQSSHNRPVLPPIEPNVPPSRWFHIVLKTS 71

Qy      59 DNGQLAEIAIDVTSVYVVGQVVRNRSYFFKD---APDAAYEGLFKNTIKTRLHFGGSYPS 115
      : | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
Db      72 PANTGLTLATRADNLYWEGFKSSDGTWELTPGLIPGATYVG-----FGGTYRD 120

Qy      116 LEGEKAYRETTDLGIEPLRIGIKKL----DENAIDNYKPTIEASSLLVVIQMVSEARFT 171
      | | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
Db      121 LLGDTDKLTNVALGRQQMADAVTALHGRTKADKTS GPKQQQAREAVTTLLLMVHEATRFQ 180

Qy      172 FIENQIRNNFQQRIRPANNTISLENKWGKLSFQIRTS GANGM--FSEAV---ELERANGK 226
```

```

      : : : : : : : : : : : : : : : :
Db      181 TVSGFVAGLLHPK-----TVEKSGKISNELKAQ-VNGWQDLSEALLKTDKPPAGK 231

Qy      227 -----KYYVTAVDQVKPKIALLKfV 246
      | | : | : : | |
Db      232 PPAKFTPIEKMGVRTAEQAAATLGILLfV 260

```

RESULT 8

```

US-10-953-349-30543
; Sequence 30543, Application US/10953349
; Publication No. US20060107345A1
; GENERAL INFORMATION:
; APPLICANT: ALEXANDROV, Nickolai et al.
; TITLE OF INVENTION: SEQUENCE-DETERMINED DNA FRAGMENTS AND CORRESPONDING POLYPEPTIDES
; TITLE OF INVENTION: ENCODED THERBY
; FILE REFERENCE: 2750-1579PUS2
; CURRENT APPLICATION NUMBER: US/10/953,349
; CURRENT FILING DATE: 2004-09-30
; NUMBER OF SEQ ID NOS: 40252
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 30543
; LENGTH: 298
; TYPE: PRT
; ORGANISM: Triticum aestivum
US-10-953-349-30543

```

```

Query Match      8.6%; Score 110.5; DB 6; Length 298;
Best Local Similarity 21.9%; Pred. No. 0.024;
Matches 59; Conservative 49; Mismatches 116; Indels 45; Gaps 11;

```

```

Qy      2 LDTVSFSTKGATYITYVNFNLNRVKKL-PEGNSHGIPLLR--KKCDDPGKCFVLVALSN 58
      | | : | : | : | | : | | : | | : | : | : | : | :
Db      30 LFTATFNvQ-ASSTDYVTFITGIRNKLNRPGQSSHNRVLPPIEPNVPPSRWFHIVLKTS 88

Qy      59 DNGQLAEIAIDVTSVYVVGyQVRNRSYFFKD---APDAAYEGLFKNTIKTRLHFgGSYPS 115
      : | : | : | : : : : | | | | | | | | | |
Db      89 PANTGLTLATRADNLYWEGFKSSDGTWWELTPGLIPGATYVG-----FGGTYRD 137

Qy      116 LEGEKAYRETTDLGIEPLRIGIKKL----DENaidNyKpTEIASSLLVVIQMvSEAArFT 171
      | | : | : | : | : | : | : | : | : | : | : |
Db      138 LLGDTDKLTNVALGRQqMADAVTALHGRTKADKTSgPKQqQAREAVTTLMLMVHEATRFQ 197

Qy      172 FIENQIRNnfQQRIRPANNTISLENKwGKLSFQIRTSgANGM--FSEAV---ELERANGK 226
      : : : : : : : : : | | | | | : : | |
Db      198 TVSGFVAGLLHPK-----TVEKSGKISNELKAQ-VNGWQDLSEALLKTDKPPAGK 248

Qy      227 -----KYYVTAVDQVKPKIALLKfV 246
      | | : | : : | |
Db      249 PPAKFTPIEKMGVRTAEQAAATLGILLfV 277

```

RESULT 9

```

US-11-056-355B-61234
; Sequence 61234, Application US/11056355B
; Publication No. US20060150283A1
; GENERAL INFORMATION:
; APPLICANT: Brover, Vyacheslav
; APPLICANT: Alexandrov, Nickolai
; TITLE OF INVENTION: Sequence Determined DNA Fragments and Corresponding
; TITLE OF INVENTION: Polypeptides Encoded Thereby
; FILE REFERENCE: 2750-1590PUS2
; CURRENT APPLICATION NUMBER: US/11/056,355B
; CURRENT FILING DATE: 2005-02-14
; PRIOR APPLICATION NUMBER: 60/544,190
; PRIOR FILING DATE: 2004-02-13
; NUMBER OF SEQ ID NOS: 119966
; SEQ ID NO 61234
; LENGTH: 298
; TYPE: prt
; ORGANISM: Triticum aestivum
; FEATURE:
; NAME/KEY: peptide
; LOCATION: (1)..(298)
; OTHER INFORMATION: Ceres Seq. ID no. 13661988
US-11-056-355B-61234

```

Query Match 8.6%; Score 110.5; DB 7; Length 298;
Best Local Similarity 21.9%; Pred. No. 0.024;
Matches 59; Conservative 49; Mismatches 116; Indels 45; Gaps 11;

```
Qy      2 LDTVSESTKGATYITYVNFNLNLRVCLK-PEGNSHGIPLLR--KKCDDPGKCFVLVALSN 58
      | | : | : | : | | : | | : | : | : | : | : | : | : | : | : | :
Db      30 LFTATFNVQ-ASSTDYVTFITGIRNKLNRPGQSSHNRPVLPPIEPNVPPSRWFHIVLKTS 88

Qy      59 DNGQLAEIAIDVTSVYVVGQVRNRSYFFKD---APDAAYEGLFKNTIKTRLHFGGSYPS 115
      : | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
Db      89 PANTGLTLATRADNLYWEGFKSSDGTWELTPGLIPGATYVG-----FGGTYRD 137

Qy      116 LEGEKAYRETTDLGIEPLRIGIKL----DENAIDNYKPTEIASSLLVVIQMVSEARFT 171
      | | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
Db      138 LLGDTDKLTNVALGRQOMADAVTALHGRTKADKTS GPKQQQAREAVTLLLMVHEATRFO 197

Qy      172 FIENQIRNNFQQRIRPANNTISLENKWGKLSFQIRTS GANGM---FSEAV---ELERANGK 226
      : : : : : : : | | : | : | : | : | : | : | : | : | : | :
Db      198 TVSGFVAGLLHPK-----TVEKKSGKISNELKAQ-VNGWQDLSEALLKTDKPPAGK 248

Qy      227 -----KYYVTAVDQVKPKIALLKFEV 246
      | | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
Db      249 PPAKFTPIEKMGVRTAEQAAATLGILLFEV 277
```

RESULT 10

US-10-449-902-39064

; Sequence 39064, Application US/10449902

; Publication No. US20060123505A1

; GENERAL INFORMATION:

; APPLICANT: National Institute of Agrobiological Sciences.

; APPLICANT: Bio-oriented Technology Research Advancement Institution.

; APPLICANT: The Institute of Physical and Chemical Research.

; APPLICANT: Foundation for Advancement of International Science.

; TITLE OF INVENTION: FULL-LENGTH PLANT cDNA AND USES THEREOF

; FILE REFERENCE: MOA-A0205Y1-US

; CURRENT APPLICATION NUMBER: US/10/449,902

; CURRENT FILING DATE: 2003-05-29

; PRIOR APPLICATION NUMBER: JP 2002-203269

; PRIOR FILING DATE: 2002-05-30

; PRIOR APPLICATION NUMBER: JP 2002-383870

; PRIOR FILING DATE: 2002-12-11

; NUMBER OF SEQ ID NOS: 56791

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 39064

; LENGTH: 298

; TYPE: PRT

; ORGANISM: Oryza sativa

US-10-449-902-39064

Query Match 8.4%; Score 108; DB 6; Length 298;
Best Local Similarity 21.1%; Pred. No. 0.04;
Matches 49; Conservative 41; Mismatches 108; Indels 34; Gaps 6;

```
Qy      21 LNELRVCLKPEGNSHGIPLLRKKCDD--PGKCFVLVALSNDNGQLAEIAIDVTSVYVVG 78
      | | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
Db      64 LNTREVMVPEDH----PVLAPQYDDTVPPERLLL PKLVANGDKTATLALRDSNIYFIGF 119

Qy      79 QVRNRSYF-FKDAPDAAYEGLFKNTIKTR-LHFGGSYPSLEGEKAYRETTDLGIEPLRIG 136
      : : | | | | : : | | | | | : | : | : | : | : | : |
Db      120 ANKAGQWFSFKDRND-----LPPSFRARPLSFGVDYASIAGFRKNLPNYPLGRRTQTEWA 173

Qy      137 IKKLDENAIDNYKPTEIASSLLVVIQMVSEARFTFIENQIRNNFQQRIRPANNTISLEN 196
      : | | : | : | : | : | : | : | : | : | : | : | : | : | : | :
Db      174 VKVLSEYDPNRTDEATIKRAVVIILLTFCEALRFFPIRNAVEIGWDSVAYITSTDADRLV 233

Qy      197 KWGKLSFQIRTS GANG-----MFSEAVELERANGKKY 228
      | | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
Db      234 CWGQISYMLEYSFMSGHSWDSEEQRTRLKNLARDCKIFNEPQALETVDVLEY 285
```

RESULT 11

US-10-953-349-10528

; Sequence 10528, Application US/10953349

; Publication No. US20060107345A1


```

; GENERAL INFORMATION:
; APPLICANT: ALEXANDROV, Nickolai et al.
; TITLE OF INVENTION: SEQUENCE-DETERMINED DNA FRAGMENTS AND CORRESPONDING POLYPEPTIDES
; TITLE OF INVENTION: ENCODED THERBY
; FILE REFERENCE: 2750-1579PUS2
; CURRENT APPLICATION NUMBER: US/10/953,349
; CURRENT FILING DATE: 2004-09-30
; NUMBER OF SEQ ID NOS: 40252
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 10528
; LENGTH: 232
; TYPE: PRT
; ORGANISM: Arabidopsis thaliana
US-10-953-349-10528

```

```

Query Match      8.0%; Score 102.5; DB 6; Length 232;
Best Local Similarity 23.5%; Pred. No. 0.088;
Matches 59; Conservative 36; Mismatches 95; Indels 61; Gaps 10;

```

```

Qy      17 YVNFLNELRVKLPKPEGNSHGIPLLRKKCDPDKCFVL-----VALSNDNGQLAEIAIDV 70
      |::|: | : | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      7 YLNFVQAEQDNKKKNKKEKDPL---KPKHPVSAFLVYANERRAALREENKSVVEVA--- 60

Qy      71 TSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEKAY----- 122
      : | : : | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      61 ---KITGEEWKLS----DKKKAPYEKVAKKNKETYLQAMEEYKRTKEEEALSQKKEEEE 113

Qy      123 -----RETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEA 167
      : | | | | : : | | : | | | | | | | | | | | | | | | | | | |
Db      114 LLKLHKQEAQLMLKKKEKTDNLIKKEKATKKKKKNEN-VDPNPKPKKPASSY----- 162

Qy      168 ARFTFIENQIRNNFQQRIRPANNTIS--LENKWGKLSFQIRT--SGANGMFSEAV--ELE 221
      | | :: : : : | | | : : | | : | | : : : | | | | | | | | | |
Db      163 --FLFSKDERKKLTERPGTNNATVTALISLKWKESEEEKQVYNGKAAKLMEAYKKEVE 220

Qy      222 RANGKKYYVTA 232
      | | | | :
Db      221 AYNKKSAAATTS 231

```

RESULT 12

US-10-953-349-10527

; Sequence 10527, Application US/10953349

; Publication No. US20060107345A1

; GENERAL INFORMATION:

; APPLICANT: ALEXANDROV, Nickolai et al.

; TITLE OF INVENTION: SEQUENCE-DETERMINED DNA FRAGMENTS AND CORRESPONDING POLYPEPTIDES

; TITLE OF INVENTION: ENCODED THERBY

; FILE REFERENCE: 2750-1579PUS2

; CURRENT APPLICATION NUMBER: US/10/953,349

; CURRENT FILING DATE: 2004-09-30

; NUMBER OF SEQ ID NOS: 40252

; SOFTWARE: PatentIn version 3.3

; SEQ ID NO 10527

; LENGTH: 245

; TYPE: PRT

; ORGANISM: Arabidopsis thaliana

US-10-953-349-10527

```

Query Match      8.0%; Score 102.5; DB 6; Length 245;
Best Local Similarity 23.5%; Pred. No. 0.095;
Matches 59; Conservative 36; Mismatches 95; Indels 61; Gaps 10;

```

```

Qy      17 YVNFLNELRVKLPKPEGNSHGIPLLRKKCDPDKCFVL-----VALSNDNGQLAEIAIDV 70
      |::|: | : | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      20 YLNFVQAEQDNKKKNKKEKDPL---KPKHPVSAFLVYANERRAALREENKSVVEVA--- 73

Qy      71 TSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEKAY----- 122
      : | : : | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      74 ---KITGEEWKLS----DKKKAPYEKVAKKNKETYLQAMEEYKRTKEEEALSQKKEEEE 126

Qy      123 -----RETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEA 167
      : | | | | : : | | : | | | | | | | | | | | | | | | | | | |
Db      127 LLKLHKQEAQLMLKKKEKTDNLIKKEKATKKKKKNEN-VDPNPKPKKPASSY----- 175

Qy      168 ARFTFIENQIRNNFQQRIRPANNTIS--LENKWGKLSFQIRT--SGANGMFSEAV--ELE 221

```


Query Match 7.1%; Score 91; DB 6; Length 876;
Best Local Similarity 19.6%; Pred. No. 5.6;
Matches 52; Conservative 41; Mismatches 104; Indels 68; Gaps 9;

Qy 37 IPLLRRKKDDPGKCFVLVALSNDNGQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYE 96
| | | : | | | : : | | : | | : | | : : | |
Db 113 IGTLSKEADKAG--FQTIIITGDR-DLTQLATDNVTIYYTKKGVTDVDHYTPDFIAEKYN 169

Qy 97 GLFKNTI-----KTRLHFGGSYPSLEGEKAYRETTDLGIEPLR 134
| | | | | | | : | | : : | | : :
Db 170 GLTPNQIIDMKGLMGDTSDNIPGVAGVGKTAIKLLNQFDTVEGVYEHLD-----E 220

Qy 135 IGIKKLDENAIIDNYKPTEIASSLLVVIQMV-----EAARFTFIENQIRN-----NF 181
| | | | : | | : | | | : | | : | |
Db 221 ISGKKLKEK-LQNSKEDALMSKELATINVDSPIEVKLEDTLMTHQDEQQEKIELFKKLEF 279

Qy 182 QQRIRPANNTISLENKWGKLSFQIRTS-----GANGMFSEAVELER 222
: | : : : | : | : | : | | | | : : : :
Db 280 KQLLADIDQSASVEDAIEK-TFEIETSFNIDFTSLKEAAIHFELEDGGNYLRNNILKFSL 338

Qy 223 ANGKKYYVTAVDQVKPKIALLKFD 247
| : | : | | : : | : : :
Db 339 FTGEKHIVINADDINNYVELVSWLE 363

RESULT 15

US-10-953-349-14022
; Sequence 14022, Application US/10953349
; Publication No. US20060107345A1
; GENERAL INFORMATION:
; APPLICANT: ALEXANDROV, Nikolai et al.
; TITLE OF INVENTION: SEQUENCE-DETERMINED DNA FRAGMENTS AND CORRESPONDING POLYPEPTIDES
; TITLE OF INVENTION: ENCODED THERBY
; FILE REFERENCE: 2750-1579PUS2
; CURRENT APPLICATION NUMBER: US/10/953,349
; CURRENT FILING DATE: 2004-09-30
; NUMBER OF SEQ ID NOS: 40252
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 14022
; LENGTH: 239
; TYPE: PRT
; ORGANISM: Glycine max
US-10-953-349-14022

Query Match 6.9%; Score 88.5; DB 6; Length 239;
Best Local Similarity 22.9%; Pred. No. 1.7;
Matches 47; Conservative 31; Mismatches 86; Indels 41; Gaps 8;

Qy 51 FVLVAL----SNDNGQLAEIA---IDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKN-- 101
| : : | | | | | | : : : | : : | : : | : : | : : | : :
Db 7 FLILALAAGSSNQGGAAAAAGARPDLI VMKLHGHDPGSPVAFQ-THDLSFAG-FTNGG 64

Qy 102 -----TIKTRLHFGGSYPSLEGEKAYRETTDLGIEPLRIGIKKLDENAIIDNY 148
| | | | | | | | | | | | | : : : : | : : : : | : : : :
Db 65 GHWQAFPLAHLFPTSTPLPFGSSYDDLIGGLANLPRVPLGRQAMADAARVLSA-----Y 119

Qy 149 KPTEIAS-----SLLVVIQMVSEARFTFIENQIRNNFQQRIRPANNTISLENKWGK 200
| : | : : | : : | : : | : : | : : | : : | : : | : : | : :
Db 120 DPSAAAAADVEPVKRALAALKVMLGDAQRLQPIHETVVRGWESESRAPEHLPIYIDHWD 179

Qy 201 LSFQI----RTSGANGMFSEAVELE 221
: | : : | | | : : : : : : : : : :
Db 180 ISYEIRANRTGKWNGPFAKMLETQ 204

Search completed: July 20, 2006, 09:41:18
Job time : 14.8192 secs

SCORE 1.3 BuildDate: 12/06/2005

SCORE Search Results Details for Application 10717243 and Search Result us-10-717-243-2.rup.

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OM protein - protein search, using sw model

Run on: July 20, 2006, 09:36:29 ; Search time 257.947 Seconds
(without alignments)
900.105 Million cell updates/sec

Title: US-10-717-243-2
Perfect score: 1287
Sequence: 1 GLDTVSFSTKGATYITYVNF.....AVDQVKPKIALLLKFVDKDPK 251

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2849598 seqs, 925015592 residues

Total number of hits satisfying chosen parameters: 2849598

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : UniProt_7.2:*
1: uniprot_sprot:*
2: uniprot_trembl:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Match	Query Length	DB ID	Description
1	1287	100.0	316	1 RIPG_GELMU	P33186 gelonium mu
2	1242.5	96.5	258	2 Q9S9E4_GELMU	Q9s9e4 gelonium mu
3	394.5	30.7	581	2 Q94BW5_CINCA	Q94bw5 cinnamomum
4	393.5	30.6	580	2 Q94BW3_CINCA	Q94bw3 cinnamomum
5	392.5	30.5	549	2 Q9FV22_CINCA	Q9fv22 cinnamomum
6	388	30.1	299	2 Q8GZN9_9ROSI	Q8gzn9 euphorbia s
7	386.5	30.0	580	2 Q94BW4_CINCA	Q94bw4 cinnamomum
8	361.5	28.1	563	2 Q8GT32_SAMNI	Q8gt32 sambucus ni
9	357.5	27.8	297	2 Q8GZP0_9ROSI	Q8gzp0 euphorbia s
10	352	27.4	563	1 NIGB_SAMNI	P33183 sambucus ni
11	352	27.4	563	2 Q945S2_SAMNI	Q945s2 sambucus ni
12	348.5	27.1	563	2 O04367_SAMNI	O04367 sambucus ni
13	346	26.9	264	2 Q684J5_MOMCH	Q684j5 momordica c
14	346	26.9	286	1 RIP2_MOMBA	P29339 momordica b
15	346	26.9	286	1 RIP3_MOMCH	P24817 momordica c

16	346	26.9	286	2	Q5PZ05_MOMCH	Q5pz05 momordica c
17	344	26.7	541	2	Q41174_RICCO	Q41174 ricinus com
18	343	26.7	576	1	RICI_RICCO	P02879 ricinus com
19	341.5	26.5	265	1	RIP2_PHYDI	P34967 phytolacca
20	338.5	26.3	294	1	RIP1_TRIAN	P56626 trichosanth
21	337.5	26.2	564	2	Q9AVR2_9DIPS	Q9avr2 sambucus eb
22	334.5	26.0	564	1	AGGL_RICCO	P06750 ricinus com
23	333.5	25.9	527	1	ABRB_ABRPR	Q06077 abrus preca
24	333	25.9	282	1	RIP2_BRYDI	P98184 bryonia dio
25	330.5	25.7	294	1	RIPA_PHYAM	Q03464 phytolacca
26	329	25.6	252	2	Q38760_ABRPR	Q38760 abrus preca
27	327.5	25.4	293	2	Q8VYU0_9ROSI	Q8vyu0 jatropha cu
28	327.5	25.4	294	2	Q8H1W1_PHYAM	Q8hlw1 phytolacca
29	325.5	25.3	275	2	Q84LJ1_GYNPE	Q84lj1 gynostemma
30	325	25.3	313	1	RIP1_PHYAM	P10297 phytolacca
31	325	25.3	313	2	Q53YN2_PHYAM	Q53yn2 phytolacca
32	325	25.3	313	2	Q6PWU4_PHYAM	Q6pwu4 phytolacca
33	324.5	25.2	277	2	Q84JR1_GYNPE	Q84jr1 gynostemma
34	324.5	25.2	293	2	Q8S452_9ROSI	Q8s452 jatropha cu
35	324	25.2	289	2	Q41216_TRIKI	Q41216 trichosanth
36	323.5	25.1	277	2	Q8GV09_GYNPE	Q8gv09 gynostemma
37	322.5	25.1	275	2	Q8H1Y4_GYNPE	Q8hly4 gynostemma
38	322.5	25.1	298	2	Q5FOI3_GYNPE	Q5f0i3 gynostemma
39	321	24.9	289	1	RIP1_TRIKI	P09989 trichosanth
40	321	24.9	289	2	Q94KE4_TRIKI	Q94ke4 trichosanth
41	321	24.9	567	2	Q6H267_VISAL	Q6h267 viscum albu
42	320.5	24.9	277	2	Q8GV11_GYNPE	Q8gv11 gynostemma
43	320.5	24.9	565	2	O04071_SAMNI	O04071 sambucus ni
44	320	24.9	251	2	Q7DM12_ABRPR	Q7dml2 abrus preca
45	320	24.9	252	2	Q38761_ABRPR	Q38761 abrus preca

ALIGNMENTS

RESULT 1

RIPG_GELMU

ID RIPG_GELMU STANDARD; PRT; 316 AA.
AC P33186;
DT 01-OCT-1993, integrated into UniProtKB/Swiss-Prot.
DT 01-NOV-1995, sequence version 2.
DT 07-FEB-2006, entry version 44.
DE Ribosome-inactivating protein gelonin precursor (EC 3.2.2.22) (rRNA N-glycosidase).
GN Name=GEL;
OS Gelonium multiflorum (Euphorbiaceae himalaya).
OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC Spermatophyta; Magnoliophyta; eudicotyledons; core eudicotyledons;
OC rosids; eurosids I; Malpighiales; Euphorbiaceae; Crotonoideae;
OC Gelonieae; Gelonium.
OX NCBI_TaxID=3979;
RN [1]
RP NUCLEOTIDE SEQUENCE [MRNA].
RX MEDLINE=94085781; PubMed=7916721; DOI=10.1016/0378-1119(93)90097-M;
RA Nolan P.A., Garrison D.A., Better M.;
RT "Cloning and expression of a gene encoding gelonin, a ribosome-inactivating protein from Gelonium multiflorum.";
RL Gene 134:223-227(1993).
RN [2]
RP PROTEIN SEQUENCE OF 47-93.
RC TISSUE=Seed;
RX MEDLINE=89326691; PubMed=2753596;
RA Montecucchi P.-C., Lazzarini A.M., Barbieri L., Stirpe F., Soria M.,
RA Lappi D.;
RT "N-terminal sequence of some ribosome-inactivating proteins.";
RL Int. J. Pept. Protein Res. 33:263-267(1989).
RN [3]
RP X-RAY CRYSTALLOGRAPHY (1.8 ANGSTROMS).
RX MEDLINE=95333189; PubMed=7608981;
RA Hosur M.V., Nair B., Satyamurthy P., Misquith S., Surolia A.,
RA Kannan K.K.;
RT "X-ray structure of gelonin at 1.8-A resolution.";
RL J. Mol. Biol. 250:368-380(1995).
CC -!- CATALYTIC ACTIVITY: Endohydrolysis of the N-glycosidic bond at one
CC specific adenosine on the 28S rRNA.
CC -!- SUBUNIT: Homodimer.

CC -!- SIMILARITY: Belongs to the ribosome-inactivating protein family.
 CC Type 1 RIP subfamily.
 CC -----
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 CC -----
 DR EMBL; L12243; AAA16312.1; -; mRNA.
 DR PIR; JT0753; JT0753.
 DR HSSP; P09989; 1MRJ.
 DR InterPro; IPR001574; RIP.
 DR Pfam; PF00161; RIP; 1.
 DR PRINTS; PR00396; SHIGARICIN.
 DR PROSITE; PS00275; SHIGA_RICIN; 1.
 KW Direct protein sequencing; Glycoprotein; Hydrolase; Plant defense;
 KW Protein synthesis inhibitor; Signal; Toxin.
 FT SIGNAL 1 26 Potential.
 FT PROPEP 27 46
 FT /FTId=PRO_0000030786.
 FT CHAIN 47 297 Ribosome-inactivating protein gelonin.
 FT /FTId=PRO_0000030787.
 FT PROPEP 298 316 Removed in mature form.
 FT /FTId=PRO_0000030788.
 FT ACT_SITE 212 212
 FT CARBOHYD 235 235 N-linked (GlcNAc. . .).
 FT DISULFID 90 96
 FT CONFLICT 90 90 C -> K (in Ref. 2).
 FT CONFLICT 93 93 P -> D (in Ref. 2).
 SQ SEQUENCE 316 AA; 35419 MW; 1252F3E710901B85 CRC64;

Query Match 100.0%; Score 1287; DB 1; Length 316;
 Best Local Similarity 100.0%; Pred. No. 2.6e-101;
 Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GLDTVSFSTKGATYITYVNFNLRLVRLKPEGNHSHGIPLLRKKCDPGKCFVLVALSNDN 60
 Db 47 GLDTVSFSTKGATYITYVNFNLRLVRLKPEGNHSHGIPLLRKKCDPGKCFVLVALSNDN 106
 Qy 61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
 Db 107 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 166
 Qy 121 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAFTFIENQIRNN 180
 Db 167 AYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAFTFIENQIRNN 226
 Qy 181 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 240
 Db 227 FQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTAVDQVKPKI 286
 Qy 241 ALLKFVDKDPK 251
 Db 287 ALLKFVDKDPK 297

RESULT 2
 Q9S9E4_GELMU
 ID Q9S9E4_GELMU PRELIMINARY; PRT; 258 AA.
 AC Q9S9E4;
 DT 01-MAY-2000, integrated into UniProtKB/TrEMBL.
 DT 01-MAY-2000, sequence version 1.
 DT 07-FEB-2006, entry version 21.
 DE rRNA -glycosidase (EC 3.2.2.22) (rRNA N-glycosidase).
 OS Gelonium multiflorum (Euphorbiaceae himalaya).
 OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
 OC Spermatophyta; Magnoliophyta; eudicotyledons; core eudicotyledons;
 OC rosids; eurosids I; Malpighiales; Euphorbiaceae; Crotonoideae;
 OC Gelonieae; Gelonium.
 OX NCBI_TaxID=3979;
 RN [1]
 RP PROTEIN SEQUENCE.
 RX MEDLINE=96006751; PubMed=7553224;
 RA Rosenblum M.G., Kohr W.A., Beattie K.L., Beattie W.G., Marks W.,
 RA Toman P.D., Cheung L.;
 RT "Amino acid sequence analysis, gene construction, cloning, and
 RT expression of gelonin, a toxin derived from Gelonium multiflorum.";
 RL J. Interferon Cytokine Res. 15:547-555(1995).

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CC -----
DR HSSP; P09989; 1MRJ.
DR GO; GO:0016787; F:hydrolase activity; IEA.
DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
DR GO; GO:0006952; P:defense response; IEA.
DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
DR GO; GO:0009405; P:pathogenesis; IEA.
DR InterPro; IPR001574; RIP.
DR Pfam; PF00161; RIP; 1.
DR PRINTS; PR00396; SHIGARICIN.
DR PROSITE; PS00275; SHIGA_RICIN; 1.
KW Hydrolase; Plant defense; Protein synthesis inhibitor; Toxin.
SQ SEQUENCE 258 AA; 28826 MW; 13D68E673F4D6B06 CRC64;

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Query Match          96.5%; Score 1242.5; DB 2; Length 258;
Best Local Similarity 95.8%; Pred. No. 1.3e-97;
Matches 248; Conservative 1; Mismatches 1; Indels 9; Gaps 2;

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Qy      1 GLDTSVFSTKGATYITYVNFNLNLRVKKLPEGNSHGIPLLRKKCDPDKCFVLVALSNDN 60
        |||
Db      1 GLDTSVFSTKGATYITYVNFNLNLRVKKLPEGNSHGIPLLRKG-DDPGKCFVLVALSNDN 59

Qy      61 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTI-----KTRLHFHFGGS 112
        |||
Db      60 GQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKNPLLFGGKTRLHFHFGGS 119

Qy      113 YPSLEGEKAYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTF 172
        |||
Db      120 YPSLEGEKAYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTF 179

Qy      173 IENQIRNNFQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTA 232
        |||
Db      180 IENQIRNNFQQRIRPANNTISLENKWGKLSFQIRTSGANGMFSEAVELERANGKKYYVTA 239

Qy      233 VDQVKPKIALLLKFVDKDPK 251
        |||
Db      240 VDQVKPKIALLLKFVDKDPE 258

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RESULT 3

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Q94BW5_CINCA
ID Q94BW5_CINCA PRELIMINARY; PRT; 581 AA.
AC Q94BW5;
DT 01-DEC-2001, integrated into UniProtKB/TrEMBL.
DT 01-DEC-2001, sequence version 1.
DT 07-FEB-2006, entry version 18.
DE Type 2 ribosome-inactivating protein cinnamomin I precursor.
OS Cinnamomum camphora (Camphor tree).
OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC Spermatophyta; Magnoliophyta; magnoliids; Laurales; Lauraceae;
OC Cinnamomum.
OX NCBI_TaxID=13429;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=21888636; PubMed=11891062; DOI=10.1016/S0378-1119(01)00890-3;
RA Yang Q., Liu R.S., Gong Z.Z., Liu W.Y.;
RT "Studies of three genes encoding Cinnamomin (a type II RIP) isolated
RL from the seeds of camphor tree and their expression patterns.";
RL Gene 284:215-223(2002).
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CC -----
DR EMBL; AY039801; AAK82458.1; -; Genomic_DNA.
DR HSSP; P02879; 2AAI.
DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
DR InterPro; IPR000772; Ricin_B_lectin.
DR InterPro; IPR001574; RIP.
DR Pfam; PF00652; Ricin_B_lectin; 2.
DR Pfam; PF00161; RIP; 1.
DR PRINTS; PR00396; SHIGARICIN.
DR SMART; SM00458; RICIN; 2.

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DR      PROSITE; PS50231; RICIN_B_LLECTIN; 2.
KW      Signal.
FT      SIGNAL          1          32          Potential.
FT      CHAIN           33         581         type 2 ribosome-inactivating protein
FT                                         cinnamomin I.
SQ      SEQUENCE       581 AA;  64216 MW;  6E8F5FB8FBA3D196 CRC64;

Query Match          30.7%;  Score 394.5;  DB 2;  Length 581;
Best Local Similarity 39.7%;  Pred. No. 9.5e-25;
Matches 100;  Conservative 45;  Mismatches 94;  Indels 13;  Gaps 8;

Qy      4  TVSFSTKGATYITYVNFLELNRVKLKPEGNHSHGIPLLRKKCDDEP-GKCFVLVALSN---D 59
      ||::||| || :| |: || :|      |||::|:: | | |::||| || |
Db      35  TVTFTTKNATKTSYTFIEALRAQLASGEEPFGIPVMRERSTVPDSKRFILVELSNWAAD 94

Qy      60  NGQLAEIAIDVTSVYVVGQVRNRSYFFK-DAPDAAYEGLFKNTIKTRLHFSGSYPSLEG 118
      :      ::||| || |: ::|:| : | || | | | :| :      | ||| |||
Db      95  SP--VTLAVDVTNAYVVAYRTGSQSFFLREDNPDPAIENLLPDTKRYTFFFSGSYTDLEG 152

Qy      119 EKA-YRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIENQI 177
      || ||::|| | | : :: : : | ||:|||||::|| | ||| ::
Db      153 VAGERREEILLGMDPLENAISALWISNLNQQR--ALARSLIVVIQMVAEAVRFRFIEYRV 210

Qy      178 RNNFQ--QRIRPANNTISLENKWKGLSFQIRTSANGMFSEAVELERANGKKYYVTAV-D 234
      | :      : || :||| || || :| |::| ||| : | || :| |
Db      211 RGSISRAEFRPDPAMLSLENKWSALSNVQQSNQGGVFSPELRSISNKPVYGVGSVD 270

Qy      235 QVKPKIALLKFEV 246
      :| :::|:
Db      271 RVISGLAIMLFI 282

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Qy      4 TVSFSTKGATYITYVNFNLRLVRLKPEGNHSHGIPLLRKKCDGP-GKCFVLVALSN---D 59
Db      35 TVTFTTKNATKTSYQFIEALRAQLASGEEPHGIPVMRERSTVPDSKRFLVELSNWAAD 94

Qy      60 NGQLAEIAIDVTSVYVVGQVQRNRSYFFK-DAPDAAYEGLFKNTIKTRLHFGGSYPSLE- 117
Db      95 SP--VTLAVDVTNAYVVAYRTGSQSFFLREDNPDPAIENLLPDTKRYTFPFGSGSYTDLER 152

Qy      118 --GEKAYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIASSLLVVIQMVSEARFTFIEN 175
Db      153 VAGER--REEILLGMDPLENAISALWISNLNQQR--ALARSLIVVIQMVSEAVRFRFIEY 208

Qy      176 QIRNNF--QQRIRPANNTISLENKWKLSFQIRTSANGMFSEAVELERANGKKYYVTAV 233
Db      209 RVRESITRAEMFRPDPAMLSLENKWSALSNAVQQSNQGGVFSSPVELRSISNKPVYVGSV 268

Qy      234 -DQVKPKIALLLKFV 246
Db      269 SDRVISGLAIMLFI 282

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RESULT 5

Q9FV22_CINCA

ID Q9FV22_CINCA PRELIMINARY; PRT; 549 AA.

AC Q9FV22;

DT 01-MAR-2001, integrated into UniProtKB/TrEMBL.

DT 01-MAR-2001, sequence version 1.

DT 07-FEB-2006, entry version 19.

DE Type II ribosome-inactivating protein cinnamomin (Fragment).

OS Cinnamomum camphora (Camphor tree).

OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

OC Spermatophyta; Magnoliophyta; magnoliids; Laurales; Lauraceae;

OC Cinnamomum.

OX NCBI_TaxID=13429;

RN [1]

RP NUCLEOTIDE SEQUENCE.

RA Xie L., Liu W.-Y., Wang E.-D.;

RL Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases.

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CC

DR EMBL; AF259548; AAF68978.2; -; mRNA.

DR HSSP; P02879; 2AAI.

DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.

DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.

DR InterPro; IPR000772; Ricin_B_lectin.

DR InterPro; IPR001574; RIP.

DR Pfam; PF00652; Ricin_B_lectin; 2.

DR Pfam; PF00161; RIP; 1.

DR PRINTS; PR00396; SHIGARICIN.

DR SMART; SM00458; RICIN; 2.

DR PROSITE; PS50231; RICIN_B_LLECTIN; 2.

FT NON_TER 1 1

SQ SEQUENCE 549 AA; 60649 MW; 02607FE607CA44B0 CRC64;

Query Match 30.5%; Score 392.5; DB 2; Length 549;

Best Local Similarity 39.7%; Pred. No. 1.3e-24;

Matches 100; Conservative 45; Mismatches 94; Indels 13; Gaps 0;

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Qy      4 TVSFSTKGATYITYVNFNLRLVRLKPEGNHSHGIPLLRKKCDGP-GKCFVLVALSN---D 59
Db      3 TVTFTTKKATKTSYQFIEALRAQLASGEEPHGIPVMRERSTVPDSKRFLVELSNWAAD 62

Qy      60 NGQLAEIAIDVTSVYVVGQVQRNRSYFFK-DAPDAAYEGLFKNTIKTRLHFGGSYPSLEG 118
Db      63 SP--VTLAVDVTNAYVVAYRTGSQSFFLREDNPDPAIENLLPDTKRYTFPFGSGSYTDLEG 120

Qy      119 EKA-YRETTDLGIEPLRIGIKKLDENAIIDNYKPTIASSLLVVIQMVSEARFTFIENQI 177
Db      121 VAGERREEILLGMDPLENAISALWISNLNQQR--ALARSLIVVIQMVSEAVRFRFIEYRV 178

Qy      178 RNNFQ--QQRIRPANNTISLENKWKLSFQIRTSANGMFSEAVELERANGKKYYVTAV-D 234
Db      179 RGSISRAEMFRPDPAMLSLENKWSALSNAVQQSNQGGVFSSPVELRSISNKPVYVGSVSD 238

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Q94BW4_CINCA
ID Q94BW4_CINCA PRELIMINARY; PRT; 580 AA.
AC Q94BW4;
DT 01-DEC-2001, integrated into UniProtKB/TrEMBL.
DT 01-DEC-2001, sequence version 1.
DT 07-FEB-2006, entry version 18.
DE Type 2 ribosome-inactivating protein cinnamomin II precursor.
OS Cinnamomum camphora (Camphor tree).
OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC Spermatophyta; Magnoliophyta; magnoliids; Laurales; Lauraceae;
OC Cinnamomum.
OX NCBI_TaxID=13429;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=21888636; PubMed=11891062; DOI=10.1016/S0378-1119(01)00890-3;
RA Yang Q., Liu R.S., Gong Z.Z., Liu W.Y.;
RT "Studies of three genes encoding Cinnamomin (a type II RIP) isolated
RT from the seeds of camphor tree and their expression patterns.";
RL Gene 284:215-223(2002).
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CC -----
DR EMBL; AY039802; AAK82459.1; -; Genomic_DNA.
DR HSSP; P02879; 2AAI.
DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
DR InterPro; IPR000772; Ricin_B_lectin.
DR InterPro; IPR001574; RIP.
DR Pfam; PF00652; Ricin_B_lectin; 2.
DR Pfam; PF00161; RIP; 1.
DR PRINTS; PR00396; SHIGARICIN.
DR SMART; SM00458; RICIN; 2.
DR PROSITE; PS50231; RICIN_B_LECTIN; 2.
KW Signal.
FT SIGNAL 1 32 Potential.
FT CHAIN 33 580 type 2 ribosome-inactivating protein
FT cinnamomin II.
SQ SEQUENCE 580 AA; 64266 MW; 37E4289ECCE0CBFF CRC64;

Query Match 30.0%; Score 386.5; DB 2; Length 580;
Best Local Similarity 39.8%; Pred. No. 4.5e-24;
Matches 101; Conservative 43; Mismatches 93; Indels 17; Gaps 9;

Qy 4 TVSFSTKGATYITYVNFNLRLVKLKPEGNSHGIPLLRKKCDGP-GKCFVLVALSN---D 59
||:|:| | | : | : | | : | | | : | | | : | | | |
Db 35 TVTFTTKNATKTSYTQFIEALRAQLASGEEPHGIPVMRDGSTVPDSKRFLVELSNWAAD 94

Qy 60 NGQLAEIAIDVTSVYVVGQYVRNRSYFFK-DAPDAAYEGLFKNTIKTRLHFGGSYPSLE- 117
: |:|:|: | | | : |:| : | | | : | : | | | |
Db 95 SP--VALAVDVTNAYVYRTGSQFFLRDNPDPAIENLLPDTKRYTFPFGSYTDLER 152

Qy 118 --GEKAYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEARFTFIEN 175
| | | | : | | : : : : | | : | | | : | | | |
Db 153 VAGE--LREEILLGMDPLENAISALWTSNQLQQR--ALARSLIVVIQMVAEAVRFRFIEY 208

Qy 176 QIRNNF--QQRIRPANNTISLENKWKLSFQIRTSGANGMFSEAVELERANGKKYYVTAV 233
::| : : | | : | | | | | : : | : | | | : | | : |
Db 209 RVRESITRAEMFRPDPAMLSLENKWSALSNAVQQSNQGGVFSSPVELRSISNKPVYVGSV 268

Qy 234 -DQVKPKIALLKFEV 246
|:| :|: :|:
Db 269 SDRVISGLAIMLFI 282

RESULT 8

Q8GT32_SAMNI
ID Q8GT32_SAMNI PRELIMINARY; PRT; 563 AA.
AC Q8GT32;
DT 01-MAR-2003, integrated into UniProtKB/TrEMBL.
DT 01-MAR-2003, sequence version 1.
DT 07-FEB-2006, entry version 13.
DE Type 2 ribosome-inactivating protein Nigrin 1 (EC 3.2.2.22).
OS Sambucus nigra (European elder).
OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC Spermatophyta; Magnoliophyta; eudicotyledons; core eudicotyledons;

OC asterids; campanulids; Dipsacales; Adoxaceae; Sambucus.
 OX NCBI_TaxID=4202;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RC TISSUE=Leaf;
 RA Girbes T., Arias F.J., Antolin P.;
 RL Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases.
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 CC -----
 DR EMBL; AF249280; AAN86130.1; -; mRNA.
 DR HSSP; Q9AVR2; 1HWM.
 DR SMR; Q8GT32; 26-274, 299-560.
 DR GO; GO:0016798; F:hydrolase activity, acting on glycosyl bonds; IEA.
 DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
 DR GO; GO:0005975; P:carbohydrate metabolism; IEA.
 DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
 DR InterPro; IPR000772; Ricin_B_lectin.
 DR InterPro; IPR001574; RIP.
 DR Pfam; PF00652; Ricin_B_lectin; 2.
 DR Pfam; PF00161; RIP; 1.
 DR PRINTS; PR00396; SHIGARICIN.
 DR SMART; SM00458; RICIN; 2.
 DR PROSITE; PS50231; RICIN_B_LLECTIN; 2.
 DR PROSITE; PS00275; SHIGA_RICIN; 1.
 KW Glycosidase; Hydrolase.
 SQ SEQUENCE 563 AA; 62173 MW; 0EB236421FC5E04F CRC64;

Query Match 28.1%; Score 361.5; DB 2; Length 563;
 Best Local Similarity 41.0%; Pred. No. 6e-22;
 Matches 94; Conservative 36; Mismatches 82; Indels 17; Gaps 8;

Qy 1 GLD--TVSFSTKGATYITYVNFLELRVKLKEG--NSHGIPLLRKKCDPGKC-FVLVA 55
 Db 25 GIDYPSVSFNLGAKSATYRDFLSNLR-KTVATGTVEVNGLPVLRRESEVQVKSRLFVLP 83
 Qy 56 LSNDNGQLAEIAIDVTSVYVVGQVVRNSYFFKDAPDAAYEGLFKNTIKTRLHFHGGSYPS 115
 Db 84 LTNYNGTNTVLAVDVTNLYVAFSGNANSYFFKDATEVQKSNLNFVGTQNTLSFTGNYDN 143
 Qy 116 LE-GEKAYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIEASSLLVVIQMVSEAAARFTFIE 174
 Db 144 LETAANTRESIELGPSPLDGAITSL-----YHGDSVARSLLVVIQMVSEAAARFRIE 196
 Qy 175 NQIRNNFQQ--RIRPANNTISLENKWKLSFQIRTSKAN-GMFSEAVEL 220
 Db 197 QEVRRSLQQATSFTPNASMLSMENNWSSMSLEIQAGNNVSPFSGTVQL 245

RESULT 9

Q8GZPO_9ROSI

ID Q8GZPO_9ROSI PRELIMINARY; PRT; 297 AA.
 AC Q8GZPO;
 DT 01-MAR-2003, integrated into UniProtKB/TrEMBL.
 DT 01-MAR-2003, sequence version 1.
 DT 07-FEB-2006, entry version 13.
 DE Ribosome inactivating protein Euserratin 1 precursor (EC 3.2.2.22).
 GN Name=Eusl;
 OS Euphorbia serrata.
 OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
 OC Spermatophyta; Magnoliophyta; eudicotyledons; core eudicotyledons;
 OC rosids; eurosids I; Malpighiales; Euphorbiaceae; Euphorbioideae;
 OC Euphorbieae; Euphorbia.
 OX NCBI_TaxID=196589;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RA Girbes T., Arias F.J., Benvenuto E.;
 RT "Purification, characterization and molecular cloning of euserratins,
 RT new type 1 ribosome-inactivating proteins from Euphorbia serrata L.";
 RL Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases.
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 CC -----
 DR EMBL; AF457874; AA015530.1; -; mRNA.

DR HSSP; P33185; 1BRY.
 DR GO; GO:0016798; F:hydrolase activity, acting on glycosyl bonds; IEA.
 DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
 DR GO; GO:0005975; P:carbohydrate metabolism; IEA.
 DR GO; GO:0006952; P:defense response; IEA.
 DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
 DR GO; GO:0009405; P:pathogenesis; IEA.
 DR InterPro; IPR001574; RIP.
 DR Pfam; PF00161; RIP; 1.
 DR PRINTS; PRO0396; SHIGARICIN.
 DR PROSITE; PS00275; SHIGA_RICIN; 1.
 KW Glycosidase; Hydrolase; Plant defense; Protein synthesis inhibitor;
 KW Signal; Toxin.
 FT SIGNAL 1 22 Potential.
 FT CHAIN 23 297 ribosome inactivating protein Euserratin
 FT 1.
 SQ SEQUENCE 297 AA; 33146 MW; A5269E1DDB91287A CRC64;

Query Match 27.8%; Score 357.5; DB 2; Length 297;
 Best Local Similarity 39.8%; Pred. No. 5.7e-22;
 Matches 98; Conservative 39; Mismatches 98; Indels 11; Gaps 7;

Qy 4 TVSFSTKGATYITYVNFNLRLVRLKPEGNHSHGIPLLRKKCD--DPGKCFVLVALSN-DN 60
 || || | | : | : || | : : || || || | | | : || | | |
 Db 29 TVKFTTHLASVGSYQTLMSALRVNLESKLESHNIPLLRKPSDITDQNK-YLLVELTNYDT 87

Qy 61 GOLAEIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLEGEK 120
 : : | : ||| : || : : | || | | | | | | : | : | : | :
 Db 88 KRTVTILALTVLNVYVIGYKSGTKSFFLKDAPSDAKTLLFTDTTPKTFLEVDNTYNNL-GD- 145

Qy 121 AYRETTDLGIEPLRIGIKKLDENAIIDNYK-PTEIASSLLVVIQMVSEARFTFIENQIRN 179
 | || | : | | | | : : ||| : ||| || || || || || || : :
 Db 146 --RSKVLGLIPALKNAINIL--NQFDGVSTDQDFKHSLLVVIQMVSEARFKFIQLKIEG 201

Qy 180 NFQQRIRPANNTISLENKWKLSFQIRTSANGMFSEAVELEERANGKKYYVTAVDQVKPK 239
 : | : || : | | || : : || | || : | : | | | : || :
 Db 202 GLLTQYLPKPDITISYQNNWSALSQSIQLADANGRLSESVTLKYEDGKDRVVFVMEQVQRD 261

Qy 240 IALLKF 245
 | : || :
 Db 262 ISLLLY 267

RESULT 10

NIGB_SAMNI

ID NIGB_SAMNI STANDARD; PRT; 563 AA.
 AC P33183; P33184; P93542;
 DT 01-OCT-1993, integrated into UniProtKB/Swiss-Prot.
 DT 05-DEC-2001, sequence version 2.
 DT 07-FEB-2006, entry version 56.
 DE Nigrin b precursor (Agglutinin V) (SNAV) [Contains: Nigrin b A chain
 (EC 3.2.2.22) (rRNA N-glycosidase); Nigrin b B chain].
 OS Sambucus nigra (European elder).
 OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
 OC Spermatophyta; Magnoliophyta; eudicotyledons; core eudicotyledons;
 OC asterids; campanulids; Dipsacales; Adoxaceae; Sambucus.
 OX NCBI_TaxID=4202;
 RN [1]
 RP NUCLEOTIDE SEQUENCE [MRNA].
 RC TISSUE=Bark;
 RX MEDLINE=96215449; PubMed=8647092;
 RA Van Damme E.J., Barre A., Rouge P., Van Leuven F., Peumans W.J.;
 RT "Characterization and molecular cloning of Sambucus nigra agglutinin V
 (nigrin b), a GalNAc-specific type-2 ribosome-inactivating protein
 from the bark of elderberry (Sambucus nigra).";
 RL Eur. J. Biochem. 237:505-513(1996).
 RN [2]
 RP PROTEIN SEQUENCE OF 26-49 AND 298-321.
 RC TISSUE=Bark;
 RX MEDLINE=94003077; PubMed=8400135;
 RA Girbes T., Citores L., Ferreras J.M., Rojo M.A., Iglesias R.,
 RA Munoz R., Arias F.J., Calonge M., Garcia J.R., Mendez E.;
 RT "Isolation and partial characterization of nigrin b, a non-toxic novel
 type 2 ribosome-inactivating protein from the bark of Sambucus nigra
 L.";
 RL Plant Mol. Biol. 22:1181-1186(1993).

CC -!- FUNCTION: Non-toxic type 2 RIP which strongly inhibits mammalian
 CC protein synthesis but does not affect plant nor bacterial protein
 CC synthesis. The A chain is responsible for inhibiting protein
 CC synthesis through the catalytic inactivation of 60S ribosomal
 CC subunits by removing adenine from position 4,324 of 28S rRNA.
 CC -!- FUNCTION: The B chain is a galactose-specific lectin that
 CC facilitates the binding of nigrin b to the cell membrane that
 CC precedes endocytosis.
 CC -!- CATALYTIC ACTIVITY: Endohydrolysis of the N-glycosidic bond at one
 CC specific adenosine on the 28S rRNA.
 CC -!- SUBUNIT: Disulfide-linked dimer of A and B chains.
 CC -!- SIMILARITY: In the N-terminal section; belongs to the ribosome-
 CC inactivating protein family. Type 2 RIP subfamily.
 CC -!- SIMILARITY: Contains 2 ricin B-type lectin domains.

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 CC -----

DR EMBL; U41299; AAB39475.1; -; mRNA.
 DR PIR; S37382; S37382.
 DR PIR; S37383; S37383.
 DR HSSP; Q9AVR2; 1HWM.
 DR SMR; P33183; 26-274, 299-560.
 DR InterPro; IPR000772; Ricin_B_lectin.
 DR InterPro; IPR001574; RIP.
 DR Pfam; PF00652; Ricin_B_lectin; 2.
 DR Pfam; PF00161; RIP; 1.
 DR PRINTS; PRO0396; SHIGARICIN.
 DR SMART; SM00458; RICIN; 2.
 DR PROSITE; PS50231; RICIN_B_LLECTIN; 2.
 DR PROSITE; PS00275; SHIGA_RICIN; 1.
 KW Direct protein sequencing; Glycoprotein; Hydrolase; Lectin;
 KW Plant defense; Protein synthesis inhibitor; Repeat; Signal; Toxin.
 FT SIGNAL 1 25
 FT CHAIN 26 297 Nigrin b A chain.
 FT /FTId=PRO_0000030744.
 FT CHAIN 298 563 Nigrin b B chain.
 FT /FTId=PRO_0000030745.
 FT DOMAIN 305 431 Ricin B-type lectin 1.
 FT REPEAT 316 356 1-alpha.
 FT REPEAT 357 397 1-beta.
 FT REPEAT 400 432 1-gamma.
 FT DOMAIN 434 559 Ricin B-type lectin 2.
 FT REPEAT 445 482 2-alpha.
 FT REPEAT 486 524 2-beta.
 FT REPEAT 527 554 2-gamma.
 FT ACT_SITE 188 188 By similarity.
 FT CARBOHYD 221 221 N-linked (GlcNAc . . .) (Potential).
 FT CARBOHYD 368 368 N-linked (GlcNAc . . .) (Potential).
 FT CARBOHYD 376 376 N-linked (GlcNAc . . .) (Potential).
 FT CARBOHYD 483 483 N-linked (GlcNAc . . .) (Potential).
 FT CARBOHYD 537 537 N-linked (GlcNAc . . .) (Potential).
 FT DISULFID 274 302 Interchain (between B and A chains) (By
 FT similarity).
 FT DISULFID 319 338 By similarity.
 FT DISULFID 360 377 By similarity.
 FT DISULFID 448 463 By similarity.
 FT DISULFID 489 506 By similarity.
 FT CONFLICT 39 39 K -> V (in Ref. 2).
 SQ SEQUENCE 563 AA; 62300 MW; F250CBE24621BF14 CRC64;

Query Match 27.4%; Score 352; DB 1; Length 563;
 Best Local Similarity 41.1%; Pred. No. 3.9e-21;
 Matches 90; Conservative 34; Mismatches 79; Indels 16; Gaps 7;

Qy 1 GLD--TVSFSTKGATYITYVNFNLRLVRLKPEG--NSHGIPLLRKKCDPDKGC-FVLVA 55
 Db 25 GIDYPSVSFNLGAKSATYRDFLSNLR-KTVATGTYEVNGLPVLRRESEVQVKSRLFVLP 83
 Qy 56 LSNQNGQLAEIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPS 115
 Db 84 LTNYNGNTVTLAVDVTNLYVVAFSGNANSYFFKDATEVQKSNLFGVTKQNTLSFTGNYDN 143
 Qy 116 LE-GEKAYRETTDLGIEPLRIGIKKLDENAIIDNYKPTIEASSLLVVIQMVSEAAARFTFIE 174
 Db 144 LETAANTRRSIELGPSPLDGAITSL-----YHGDSVARSLVVIQMVSEAAARFRYIE 196

RESULT 11

SQ SEQUENCE 563 AA; 62242 MW; 07F7CBEDCF33BF10 CRC64;

Db 197 QEVRRSLQATSETPNALMI SMENNWSSMSLEIQAGNN 235

OC Spermatophyta; Magnoliophyta; eudicotyledons; core eudicotyledons;

OC asterids; campanulids; Dipsacales; Adoxaceae; Sambucus.
 OX NCBI_TaxID=4202;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RX MEDLINE=98112023; PubMed=9450339;
 RA Van Damme E.J., Roy S., Barre A., Rouge P., Van Leuven F.,
 RA Peumans W.J.;
 RT "The major elderberry (*Sambucus nigra*) fruit protein is a lectin
 derived from a truncated type 2 ribosome-inactivating protein.";
 RL Plant J. 12:1251-1260(1997).
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 CC -----
 DR EMBL; U76524; AAC15886.1; -; mRNA.
 DR HSSP; Q9AVR2; 1HWM.
 DR SMR; O04367; 26-276, 299-560.
 DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
 DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
 DR InterPro; IPR000772; Ricin_B_lectin.
 DR InterPro; IPR001574; RIP.
 DR Pfam; PF00652; Ricin_B_lectin; 2.
 DR Pfam; PF00161; RIP; 1.
 DR PRINTS; PR00396; SHIGARICIN.
 DR SMART; SM00458; RICIN; 2.
 DR PROSITE; PS50231; RICIN_B_LLECTIN; 2.
 DR PROSITE; PS00275; SHIGA_RICIN; 1.
 KW Signal.
 FT SIGNAL 1 25 Potential.
 FT CHAIN 26 297 ribosome inactivating protein, A chain.
 FT CHAIN 298 563 ribosome inactivating protein, B chain.
 SQ SEQUENCE 563 AA; 62337 MW; 3ED2B6C08E796205 CRC64;

Query Match 27.1%; Score 348.5; DB 2; Length 563;
 Best Local Similarity 39.7%; Pred. No. 7.7e-21;
 Matches 91; Conservative 36; Mismatches 87; Indels 15; Gaps 7;

Qy 1 GLD--TVSFSTKGATYITYVNFLELR-VKLKPEGNSHGIPLLRKCCDDPGK-CFVLVAL 56
 Db 25 GIDYPSVSFNLGAKSATYRDFLKNLRTIVATGTYEVNGLPVLRESEVQVKNRFVLVLL 84
 Qy 57 SNDNGQLAEIAIDVTSVYVVGQVNRNSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSSL 116
 Db 85 TNYNGNTVTLAVDVTNLYVVAFSANANSYFFKDQTLQKSNLFVGTQRHTLPFTGNYDNL 144
 Qy 117 E-GEKAYRETTDLGIEPLRIGIKKLDENAIIDNYKPTEIASSLLVVIQMVSEAAARFTFIEN 175
 Db 145 ETAAGTRRESIELGPSPLDGAITSL-----YYDESVARSLVVIQMVSEAAARFRIEQ 197
 Qy 176 QIRNNFQQR--IRPANNTISLENKWKLSFQIRTSGAN-GMFSEAVELE 221
 Db 198 EVRRSLQQTAGFTPNALMLSMENNWSSMSLEVQQSGDNVSPFTGTGTVQLQ 246

RESULT 13

Q684J5_MOMCH
 ID Q684J5_MOMCH PRELIMINARY; PRT; 264 AA.
 AC Q684J5;
 DT 11-OCT-2004, integrated into UniProtKB/TrEMBL.
 DT 11-OCT-2004, sequence version 1.
 DT 07-FEB-2006, entry version 8.
 DE Type I ribosome inactivating protein precursor (Fragment).
 GN Name=rip;
 OS Momordica charantia (Bitter melon) (Balsam pear).
 OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
 OC Spermatophyta; Magnoliophyta; eudicotyledons; core eudicotyledons;
 OC rosids; eurosids I; Cucurbitales; Cucurbitaceae; Momordica.
 OX NCBI_TaxID=3673;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=HN1;
 RA Nguyen Dinh C., Nguyen Thuy D., Le Thi Thu H., Nguyen Huy H.,
 RA Tran Thi Phuong L., Nong Van H.;
 RT "Expression of a gene encoding ribosome inactivating protein from
 bitter melon (*Momordica charantia*).";
 RL Submitted (AUG-2004) to the EMBL/GenBank/DDBJ databases.


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CC      Type 1 RIP subfamily.
CC      -----
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CC      -----
DR      EMBL; Z12175; CAA78166.1; -; Genomic_DNA.
DR      PIR; S25560; S25560.
DR      SMR; P29339; 24-286.
DR      InterPro; IPR001574; RIP.
DR      Pfam; PF00161; RIP; 1.
DR      PRINTS; PR00396; SHIGARICIN.
DR      PROSITE; PS00275; SHIGA_RICIN; 1.
KW      Hydrolase; Plant defense; Protein synthesis inhibitor; Signal; Toxin.
FT      SIGNAL      1      23
FT      CHAIN      24      286      Ribosome-inactivating protein momordin
FT                               II.
FT                               /FTId=PRO_0000030772.
FT      ACT_SITE    181      181      By similarity.
SQ      SEQUENCE    286 AA;  32032 MW;  3B89FF1AE6B25986 CRC64;

Query Match      26.9%; Score 346; DB 1; Length 286;
Best Local Similarity 37.4%; Pred. No. 5.2e-21;
Matches 91; Conservative 34; Mismatches 108; Indels 10; Gaps 5;

Qy      5 VSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDPGKCFVLVALSNDNGQLA 64
      || || || | : | | : ||| | : | : | : :
Db      25 VNFDLSTATAKTYTKFIEDFRATLPFSHKVYDIPLLYSTISD-SRRFILLDLTSYAYETI 83

Qy      65 EIAIDVTSVYVVGQVVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLE-GEKAYR 123
      :|||:|:| | : | : |||:| | || | | : | : | : |
Db      84 SVAIDVTNVYVAYRTRDVSYFFKESPEAYNILFKGTRKITLPYTGNENLQTAHKIR 143

Qy      124 ETTDLGIEPLRIGIKKLDENAIIDNYKPTETIASLLVVIQMVSEARFTFIENQIRNNFQQ 183
      | |||: | | : | : |||:| | :|||:| | :
Db      144 ENIDLGLPALSSAI-----TTLFYNAQSAPSALLVLIQTAEARFKYIERHVAKYVAT 198

Qy      184 RIRPANNTISLENKWKLSFQI-RTSGANGMFSEAVELERANGKYYVTAVDQ--VKPKI 240
      :| |||:| || || | | | : | : | : | | | |
Db      199 NFKPNLAIISLENQWSALSQIFLAQNQGGKFRNPVDLIKPTGERFQVTNVDSVVKGNI 258

Qy      241 ALL 243
      ||
Db      259 KLL 261

```

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RESULT 15
RIP3_MOMCH
ID      RIP3_MOMCH      STANDARD;      PRT;      286 AA.
AC      P24817; Q41257; Q9FSH2; Q9FUV7;
DT      01-MAR-1992, integrated into UniProtKB/Swiss-Prot.
DT      26-APR-2004, sequence version 2.
DT      07-FEB-2006, entry version 46.
DE      Ribosome-inactivating protein beta-momorcharin precursor (EC 3.2.2.22)
DE      (rRNA N-glycosidase) (MAP 30) (B-MMC).
GN      Name=MAP30; Synonyms=RIP;
OS      Momordica charantia (Bitter melon) (Balsam pear).
OC      Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC      Spermatophyta; Magnoliophyta; eudicotyledons; core eudicotyledons;
OC      rosids; eurosids I; Cucurbitales; Cucurbitaceae; Momordica.
OX      NCBI_TaxID=3673;
RN      [1]
RP      NUCLEOTIDE_SEQUENCE.
RC      TISSUE=Leaf;
RX      MEDLINE=95394347; PubMed=7665070; DOI=10.1016/0378-1119(95)00186-A;
RA      Lee-Huang S., Huang P.L., Chen H.-C., Huang P.L., Bourinbaier A.,
RA      Huang H.I., Kung H.-F.;
RT      "Anti-HIV and anti-tumor activities of recombinant MAP30 from bitter
RT      melon.";
RL      Gene 161:151-156(1995).
RN      [2]
RP      NUCLEOTIDE_SEQUENCE.
RA      Quanhong Y., Rihe P., Aisheng X.;
RL      Submitted (JUL-2000) to the EMBL/GenBank/DDBJ databases.
RN      [3]
RP      NUCLEOTIDE_SEQUENCE OF 23-286.
RA      Wei Y.-F., Cai L.-B., Zhuang W.;

```

RT "Cloning rip gene and identification of its resistance to *Aspergillus*
RT *flavus*.";
RL Submitted (JAN-2004) to the EMBL/GenBank/DDBJ databases.
RN [4]
RP NUCLEOTIDE SEQUENCE OF 23-286.
RA Nguyen Huy H., Nghiem Ngoc M., Dao Huy P., Le Tran B., Nong Van H.;
RT "Expression of a RIP gene from *Momordica charantia* in *E. coli*.";
RL Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases.
RN [5]
RP PROTEIN SEQUENCE OF 24-67.
RC TISSUE=Seed;
RX MEDLINE=91032105; PubMed=1699801; DOI=10.1016/0014-5793(90)80438-O;
RA Lee-Huang S., Huang P.L., Nara P.L., Chen H.-C., Kung H.-F., Huang P.,
RA Huang H.I., Huang P.L.;
RT "MAP 30: a new inhibitor of HIV-1 infection and replication.";
RL FEBS Lett. 272:12-18(1990).
RN [6]
RP STRUCTURE BY NMR OF 24-286, AND DNA-BINDING.
RX PubMed=10571185; DOI=10.1016/S0092-8674(00)81529-9;
RA Wang Y.-X., Neamati N., Jacob J., Palmer I., Stahl S.J., Kaufman J.D.,
RA Huang P.L., Huang P.L., Winslow H.E., Pommier Y., Wingfield P.T.,
RA Lee-Huang S., Bax A., Torchia D.A.;
RT "Solution structure of anti-HIV-1 and anti-tumor protein MAP30:
RT structural insights into its multiple functions.";
RL Cell 99:433-442(1999).
RN [7]
RP X-RAY CRYSTALLOGRAPHY (2.55 ANGSTROMS) OF 24-272.
RX PubMed=10329776; DOI=10.1107/S0907444999003297;
RA Yuan Y.-R., He Y.-N., Xiong J.-P., Xia Z.-X.;
RT "Three-dimensional structure of beta-momorcharin at 2.55 A
RT resolution.";
RL Acta Crystallogr. D 55:1144-1151(1999).
CC -!- FUNCTION: Irreversibly relaxes supercoiled DNA and catalyzes
CC double-stranded breakage. Acts also as a ribosome inactivating
CC protein.
CC -!- CATALYTIC ACTIVITY: Endohydrolysis of the N-glycosidic bond at one
CC specific adenosine on the 28S rRNA.
CC -!- PTM: Bound to a branched hexasaccharide.
CC -!- MISCELLANEOUS: Possesses anti-HIV and antitumoral activities.
CC Inhibits HIV-1 integrase.
CC -!- MISCELLANEOUS: Manganese or zinc required for enhancing substrate
CC binding rather than catalysis.
CC -!- MISCELLANEOUS: The oligosaccharide does not influence the fold of
CC the polypeptide chain and probably does not play a role in the
CC enzymatic function.
CC -!- MISCELLANEOUS: Is not toxic to uninfected normal cells as it
CC cannot enter into them.
CC -!- SIMILARITY: Belongs to the ribosome-inactivating protein family.
CC Type 1 RIP subfamily.
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CC -----
DR EMBL; S79450; AAB35194.2; -; Genomic_DNA.
DR EMBL; AF284811; AAG33028.1; -; Genomic_DNA.
DR EMBL; AY523412; AAS17014.1; -; mRNA.
DR EMBL; AJ294541; CAC08217.1; -; Genomic_DNA.
DR PIR; B61318; B61318.
DR PIR; JC4235; JC4235.
DR PDB; 1CF5; X-ray; A/B=24-272.
DR PDB; 1D8V; NMR; A=24-286.
DR InterPro; IPR001574; RIP.
DR Pfam; PF00161; RIP; 1.
DR PRINTS; PR00396; SHIGARICIN.
DR PROSITE; PS00275; SHIGA_RICIN; 1.
KW 3D-structure; Antiviral protein; Direct protein sequencing;
KW Glycoprotein; Hydrolase; Plant defense; Protein synthesis inhibitor;
KW Signal; Toxin.
FT SIGNAL 1 23
FT CHAIN 24 286 Ribosome-inactivating protein beta-
FT momorcharin.
FT /FTId=PRO_0000030773.
FT ACT_SITE 93 93 By similarity.
FT ACT_SITE 132 132 By similarity.
FT ACT_SITE 181 181 By similarity.
FT ACT_SITE 184 184 By similarity.

FT	CARBOHYD	74	74	N-linked (GlcNAc. . .).
FT	CONFLICT	23	23	G -> M (in Ref. 3 and 4).
FT	CONFLICT	37	37	Y -> T (in Ref. 5).
FT	CONFLICT	67	67	S -> P (in Ref. 5).
FT	CONFLICT	147	147	D -> E (in Ref. 4).
FT	CONFLICT	188	188	I -> T (in Ref. 1).
FT	CONFLICT	228	228	G -> A (in Ref. 4).

FT	STRAND	25	28
FT	HELIX	29	31
FT	HELIX	34	45
FT	TURN	46	47
FT	STRAND	48	48
FT	STRAND	50	54
FT	TURN	55	56
FT	STRAND	57	60
FT	STRAND	62	63
FT	TURN	66	67
FT	STRAND	68	76
FT	TURN	78	79
FT	STRAND	82	88
FT	TURN	89	91
FT	STRAND	94	99
FT	TURN	100	101
FT	STRAND	102	106
FT	TURN	107	108
FT	HELIX	111	116
FT	STRAND	117	118
FT	TURN	119	120
FT	STRAND	121	128
FT	STRAND	130	131
FT	HELIX	132	139
FT	TURN	140	140
FT	STRAND	141	141
FT	HELIX	143	145
FT	STRAND	146	146
FT	STRAND	148	149
FT	HELIX	150	161
FT	TURN	162	162
FT	TURN	165	167
FT	HELIX	168	177
FT	TURN	178	179
FT	HELIX	180	184
FT	STRAND	185	185
FT	HELIX	186	194
FT	STRAND	196	200
FT	STRAND	204	204
FT	HELIX	205	210
FT	TURN	211	214
FT	HELIX	215	222
FT	TURN	223	228
FT	STRAND	229	237
FT	TURN	239	240
FT	STRAND	241	241
FT	STRAND	243	248
FT	TURN	249	250
FT	STRAND	251	251
FT	HELIX	252	256
FT	TURN	257	257
FT	STRAND	258	258
FT	STRAND	261	261
FT	HELIX	264	269
FT	TURN	270	271
FT	TURN	274	276
FT	TURN	279	281
FT	STRAND	282	283

SQ SEQUENCE 286 AA; 32031 MW; 6B2DF55A41D8F921 CRC64;

Query Match 26.9%; Score 346; DB 1; Length 286;
 Best Local Similarity 37.4%; Pred. No. 5.2e-21;
 Matches 91; Conservative 34; Mismatches 108; Indels 10; Gaps 5;

Qy 5 VSFSTKGATYITYVNFLNELRVKLKPEGNSHGIPLLRKKCDPGKCFVLVALSNDNGQLA 64

Db 25 VNFDLSTATAKTYTKFIEDFRATLPFSHKVYDIPLLYSTISD-SRRFILLNLTSYAYETI 83

Qy 65 EIAIDVTSVYVVGQVRNRSYFFKDAPDAAYEGLFKNTIKTRLHFGGSYPSLE-GEKAYR 123

```

      :||||:|||| |: |: ||||:| | | | | | : |:| :|: |
Db      84 SVAIDVTNVYVVAYRTRDVSYFFKESPPPEAYNILFKGTRKITLPYTGNYENLQTAHKIR 143

Qy      124 ETTDLGIEPLRIGIKKLDENAIIDNYKPTIASSLLVVIQMVSEARFTFIENQIRNNFQQ 183
      | |||: | | : | | |||:| | :||| | | :
Db      144 ENIDLGLPALSSAI-----TTLFYNAQSAPSALLVLIQTAEAAARFKYIERHVAKYVAT 198

Qy      184 RIRPANNTISLENKWGKLSFQI-RTSGANGMFSEAVELERANGKKYYVTAVDQ--VKPKI 240
      :| ||||:| | | | | | | | : |:| : |:| | | |
Db      199 NFKPNLAIISLENQWSALSQIFLAQNQGKFRNPVDLIKPTGERFQVTNVDSDVVKGNI 258

Qy      241 ALL 243
      ||
Db      259 KLL 261

```

Search completed: July 20, 2006, 09:53:05
Job time : 261.197 secs

SCORE 1.3 BuildDate: 12/06/2005

SCORE Search Results Details for Application 10717243 and Search Result us-10-717-243-56.rag.

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OM protein - protein search, using sw model

Run on: July 20, 2006, 09:35:59 ; Search time 16.1993 Seconds
(without alignments)
564.490 Million cell updates/sec

Title: US-10-717-243-56
Perfect score: 114
Sequence: 1 CHHHASRVARMASDEFPSMC 20

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2589679 seqs, 457216429 residues

Total number of hits satisfying chosen parameters: 2589679

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_8:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*
9: geneseqp2005s:*
10: geneseqp2006s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	114	100.0	20	2	AAR37300	Aar37300 E.coli sh
2	114	100.0	293	2	AAW58827	Aaw58827 Shiga tox
3	114	100.0	293	2	AAY39393	Aay39393 Shiga-lik
4	114	100.0	293	3	AAY69046	Aay69046 Amino aci
5	114	100.0	299	9	AED14646	Aed14646 Protein s
6	114	100.0	315	2	AAW06403	Aaw06403 Verotoxig
7	114	100.0	315	2	AAW21702	Aaw21702 Shiga-lik

8	114	100.0	315	2	AAW25139	Aaw25139 SLT-1 (a
9	114	100.0	315	3	AAU96681	Aay96681 E. coli v
10	114	100.0	315	5	AAU77817	Aau77817 E. coli v
11	114	100.0	315	7	ADC00545	Adc00545 Enterohae
12	114	100.0	315	7	ADH34319	Adh34319 Verotoxin
13	114	100.0	315	10	AEF18888	Aef18888 Shiga tox
14	114	100.0	316	2	AAW25786	Aaw25786 Phage H19
15	114	100.0	323	2	AAW06407	Aaw06407 Histidine
16	114	100.0	323	3	AAU96686	Aay96686 Recombina
17	114	100.0	323	5	AAU77822	Aau77822 HIS-tagge
18	114	100.0	326	2	AAW06413	Aaw06413 Flag tag/
19	114	100.0	326	3	AAU96692	Aay96692 FLAG tag-
20	114	100.0	326	5	AAU77828	Aau77828 Flag tag/
21	114	100.0	332	2	AAW29294	Aaw29294 BPI pepti
22	114	100.0	409	2	AAR13118	Aar13118 Shiga-lik
23	114	100.0	409	2	AAU55891	Aay55891 E.coli ba
24	114	100.0	409	3	AAU78591	Aay78591 E. coli b
25	114	100.0	690	3	AAU96694	Aay96694 MBP-VT-1
26	114	100.0	690	5	AAU77830	Aau77830 MBPNVT1-A
27	114	100.0	708	2	AAW06411	Aaw06411 Maltose b
28	114	100.0	708	3	AAU96690	Aay96690 MBP-VT-1
29	114	100.0	708	5	AAU77826	Aau77826 MBPNVT1-A
30	100.5	88.2	27	9	AED14669	Aed14669 MUC1 epit
31	100.5	88.2	27	9	AED14671	Aed14671 MUC1 epit
32	100.5	88.2	27	9	AED14665	Aed14665 MUC1 epit
33	100.5	88.2	27	9	AED14668	Aed14668 MUC1 epit
34	100.5	88.2	27	9	AED14672	Aed14672 MUC1 epit
35	100.5	88.2	27	9	AED14673	Aed14673 MUC1 epit
36	100.5	88.2	27	9	AED14666	Aed14666 MUC1 epit
37	100.5	88.2	27	9	AED14670	Aed14670 MUC1 epit
38	100.5	88.2	27	9	AED14664	Aed14664 Peptide s
39	100.5	88.2	27	9	AED14667	Aed14667 MUC1 epit
40	100.5	88.2	27	9	AED14674	Aed14674 MUC1 epit
41	100.5	88.2	302	9	AED14649	Aed14649 Shiga lik
42	100.5	88.2	319	9	AED14650	Aed14650 Shiga lik
43	51	44.7	17	9	ADZ89477	Adz89477 Substrate
44	47	41.2	135	7	ADJ68214	Adj68214 Human hea
45	46	40.4	18	9	ADZ89463	Adz89463 Substrate

ALIGNMENTS

RESULT 1

AAR37300

ID AAR37300 standard; protein; 20 AA.

XX

AC AAR37300;

XX

DT 25-MAR-2003 (revised)

DT 13-SEP-1993 (first entry)

XX

DE E.coli shiga-like toxin segment.

XX

KW Type I ribosome-inactivating protein; ricin; momordin; immunoconjugate;

KW autoimmune disease; cell killing; toxin; human engineered antibody;

KW variable region; light chain; cell targetting; chimeric antibody; SLT.

XX

OS Escherichia coli.

XX

FH Key Location/Qualifiers

FT Disulfide-bond 1. .20

FT /note= "intervening loop includes protease sensitive

FT amino acid sequence"

XX

PN W09309130-A1.

XX

PD 13-MAY-1993.

XX

PF 04-NOV-1992; 92WO-US009487.

XX

PR 04-NOV-1991; 91US-00787567.

PR 19-JUN-1992; 92US-00901707.

XX

PA (XOMA) XOMA CORP.

XX

PI Bernhard SL, Better MD, Carroll SF, Lane JA, Lei SP;
 XX
 DR WPI; 1993-167617/20.
 XX
 PT Analogues of type I ribosome inactivating protein - useful as cytotoxic
 PT agents, immuno toxins for treating auto immune diseases, cancer, graft
 PT versus host disease and selective cell killing in=vivo.
 XX
 PS Example 10; Page 114; 163pp; English.
 XX
 CC The invention covers analogues of the plant type I RIP gelonin which have
 CC a non-naturally occurring Cys residue in a position which enables the
 CC analogue to be conjugated via a disulphide linkage to a molecule which
 CC specifically binds to a target cell. Pref. target-cell binding molecules
 CC are antibodies or their fragments, esp. human engineered H65 antibody
 CC fragments. Fusion constructs were assembled that included a natural
 CC sequence gelonin gene fused to an H65 truncated heavy chain gene or an
 CC H65 light chain (kappa) gene. A DNA linker encoding a peptide segment of
 CC the E.coli shiga-like toxin was inserted between the gelonin gene and the
 CC Ab gene. The resulting immunoconjugates can be used as cytotoxic
 CC therapeutic agents. (Updated on 25-MAR-2003 to correct PN field.)
 XX
 SQ Sequence 20 AA;

Query Match 100.0%; Score 114; DB 2; Length 20;
 Best Local Similarity 100.0%; Pred. No. 5.7e-12;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
 |||||
 Db 1 CHHHASRVARMASDEFPSMC 20

RESULT 2

AAW58827

ID AAW58827 standard; peptide; 293 AA.

XX

AC AAW58827;

XX

DT 18-AUG-1998 (first entry)

XX

DE Shiga toxin type 1 mature A subunit.

XX

KW Histine-tag; toxoid; antibody; treatment; diagnosis; prevention; Stx;

KW haemorrhagic colitis; haemolytic uremic syndrome.

XX

OS Shigella dysenteriae.

XX

PN W09811229-A2.

XX

PD 19-MAR-1998.

XX

PF 09-SEP-1997; 97WO-US015836.

XX

PR 10-SEP-1996; 96US-0025637P.

XX

PA (JACK-) JACKSON FOUND ADVANCEMENT MILITARY MED.

XX

PI Obrien AD, Schmitt CK;

XX

DR WPI; 1998-207390/18.

DR

N-PSDB; AAV11400.

XX

PT Purification and isolation of histidine-tagged Shiga toxins - useful in
 PT vaccines against haemorrhagic colitis and haemolytic uremic syndrome.

XX

PS Claim 1; Fig 2; 47pp; English.

XX

CC The Shiga toxin (Stx) peptides (AAW58827-W58830) were histine-tagged to
 CC simplify and expedite purification. Non toxic Shiga toxoids, Fusion
 CC proteins of His-tagged Shiga toxins/toxoids and antibodies can be used in
 CC the treatment, diagnosis or prevention of infections mediated by toxins
 CC of the Stx family. These are associated with haemorrhagic colitis and the
 CC life-threatening sequela, haemolytic uremic syndrome. Shiga antibodies
 CC are also useful for the treatment, diagnosis and prevention of disease
 CC and infections by pathogenic Escherichia coli

XX
SQ Sequence 293 AA;

Query Match 100.0%; Score 114; DB 2; Length 293;
Best Local Similarity 100.0%; Pred. No. 1.1e-10;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
|
Db 242 CHHHASRVARMASDEFPSMC 261

RESULT 3

AAY39393

ID AAY39393 standard; protein; 293 AA.

XX

AC AAY39393;

XX

DT 20-DEC-1999 (first entry)

XX

DE Shiga-like Toxin 1, A subunit.

XX

KW Shiga toxin; ShT; Shiga-like toxin; SLT; A subunit; B subunit; ricin;

KW microorganism clone; combinatorial library; therapeutic protein;

KW medicament; target cell; binding specificity.

XX

OS Shigella dysenteriae.

XX

PN W09940185-A1.

XX

PD 12-AUG-1999.

XX

PF 08-DEC-1998; 98WO-CA001137.

XX

PR 04-FEB-1998; 98CA-02222993.

XX

PA (ONTA-) ONTARIO CANCER INST.

XX

PI Gariepy J, Bray MR;

XX

DR WPI; 1999-590695/50.

XX

PT Production of cytotoxic heteromeric protein combinatorial libraries,

PT useful for ability to specifically bind to and kill a target cell.

XX

PS Example 1; Fig 1a; 6lpp; English.

XX

CC This is the Shiga-like toxin (SLT) subunit A amino acid sequence. SLT is
CC a bacterial toxin related to the Shiga toxin (ShT). SLT and ShT have the
CC smallest known B subunit of all AB toxins, and the A subunit has
CC identical catalytic activity as the corresponding subunit in ricin. The B
CC subunit (AAY39394) is identical for both ShT and SLT. Both the A and B
CC subunit amino acid sequences are used in the methods of the invention,
CC which relates to the creation of a library of microorganism clones
CC producing mutant proteins which are then screened for their ability to
CC specifically bind to and kill target cell. AAY39395-Y39389 and AAY43001-
CC Y43024 are examples of mutant B subunits identified by the methods of the
CC invention. The B subunit of the toxin has high binding specificity, and
CC therefore mutant versions of the B subunit may target the toxin to a
CC specific cell. Cytotoxic mutant proteins identified by the method can be
CC used to identify therapeutic proteins and medicaments having binding
CC specificity for a target cell. The cytotoxic mutants can also be used to
CC construct diagnostic probes for detecting the presence of cell surface
CC markers. These medicaments can be used to target medicines to target
CC cells in host organisms

XX

SQ Sequence 293 AA;

Query Match 100.0%; Score 114; DB 2; Length 293;
Best Local Similarity 100.0%; Pred. No. 1.1e-10;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
|
Db 242 CHHHASRVARMASDEFPSMC 261

RESULT 4

AA69046

ID AAY69046 standard; protein; 293 AA.

XX

AC AAY69046;

XX

DT 30-MAY-2000 (first entry)

XX

DE Amino acid sequence of exemplary cell toxin shiga toxin A-chain.

XX

KW Chemokine receptor; ligand; inflammatory response; immune effector cell;

KW secondary tissue damage; central nervous system injury; shiga;

KW CNS inflammatory disease; neurodegenerative disorder; heart disease;

KW inflammatory eye disease; inflammatory bowel disease; PCR primer;

KW inflammatory joint disease; inflammatory kidney; renal disease;

KW inflammatory lung disease; inflammatory nasal disease; thyroiditis;

KW inflammatory thyroid disease; cytokine-regulated cancer; ss.

XX

OS Shigella dysenteriae.

XX

PN WO200004926-A2.

XX

PD 03-FEB-2000.

XX

PF 21-JUL-1999; 99WO-CA000659.

XX

PR 22-JUL-1998; 98US-00120523.

XX

PA (OSPR-) OSPREY PHARM LTD.

XX

PI McDonald JR, Coggins PJ;

XX

DR WPI; 2000-182542/16.

XX

PT A new therapeutic agent comprising a conjugate for treating secondary
PT tissue damage and other disease conditions like Alzheimer's disease,
PT stroke, Parkinson's disease and atherosclerosis.

XX

PS Disclosure; Page 67; 204pp; English.

XX

CC The present sequence represents an exemplary cell toxin, which can be
CC incorporated into the conjugates of the invention. The specification
CC describes a conjugate, comprising a targeted agent and a chemokine
CC receptor ligand. The conjugate binds to a chemokine receptor resulting in
CC internalisation of the targeted agent in cells bearing the receptor. The
CC conjugates are used for formulating a medicament or for treating
CC disorders associated with inflammatory responses resulting from
CC activation, proliferation and migration of immune effector cells. The
CC disorders or disease states comprise secondary tissue damage such as
CC central nervous system (CNS) injury, CNS inflammatory diseases,
CC neurodegenerative disorders, heart disease, inflammatory eye diseases,
CC inflammatory bowel diseases, inflammatory joint diseases, inflammatory
CC kidney or renal diseases, inflammatory lung diseases, inflammatory nasal
CC diseases, inflammatory thyroid disease such as thyroiditis, or cytokine-
CC regulated cancers

XX

SQ Sequence 293 AA;

Query Match 100.0%; Score 114; DB 3; Length 293;

Best Local Similarity 100.0%; Pred. No. 1.1e-10;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20

|||||

Db 242 CHHHASRVARMASDEFPSMC 261

RESULT 5

AED14646

ID AED14646 standard; protein; 299 AA.

XX

AC AED14646;

XX

DT 01-DEC-2005 (first entry)

XX

DE Protein sequence of wild type A chain of shiga-like toxin 1.
 XX
 KW Toxin; therapeutic; protein engineering; drug screening; melanoma;
 KW cytostatic; neoplasm; cancer.
 XX
 OS Escherichia coli O157:H7.
 XX
 FH Key Location/Qualifiers
 FT Domain 1. .238
 FT /note = Toxic enzymatic domain
 FT Region 242. .261
 FT /note= "Protease sensitive loop"
 XX
 PN WO2005092917-A1.
 XX
 PD 06-OCT-2005.
 XX
 PF 26-MAR-2004; 2004WO-CA000443.
 XX
 PR 26-MAR-2004; 2004WO-CA000443.
 XX
 PA (GARI/) GARIEPY J.
 PA (WEIX/) WEI X.
 XX
 PI Gariepy J, Wei X;
 XX
 DR WPI; 2005-676984/69.
 XX
 PT New combinatorial protein library of protein species comprising an A
 PT chain of a toxic protein into which an insert has been introduced, useful
 PT or developing therapeutics targeted against specific cell types.
 XX
 PS Claim 4; SEQ ID NO 1; 34pp; English.
 XX
 CC The new invention relates to libraries of toxin mutants, and to methods
 CC of using them in the development of therapeutics targets against specific
 CC cell types. The libraries comprise proteins with an A chain of a
 CC heteromeric toxic protein into which an insert has been introduced. The
 CC insert is introduced into the protease-sensitive loop of the Shiga-like
 CC toxin I A chain. The insert creates an artificial binding domain with the
 CC A chain to create a toxic specificity which is independent and different
 CC from normal specificity associated with the B chain binding domain.
 CC Specifically, the insert is selected to bind to MUC-1 receptors. Also
 CC given is a method of identifying and isolating a ligand that binds to a
 CC specific target or receptor. This comprises screening the isolated
 CC protein against cells expressing the target/receptor, to confirm their
 CC toxicity for cells expressing the target or receptor. The toxin serves as
 CC a reporter, and the death of the cells is indicative of receptor binding.
 CC The invention provides a composition for treating melanoma and other
 CC types of cancer. The present sequence is the wild type A chain of shiga-
 CC like toxin 1.
 XX
 SQ Sequence 299 AA;

Query Match 100.0%; Score 114; DB 9; Length 299;
 Best Local Similarity 100.0%; Pred. No. 1.1e-10;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
 |||||
 Db 248 CHHHASRVARMASDEFPSMC 267

RESULT 6
 AAW06403
 ID AAW06403 standard; protein; 315 AA.
 XX
 AC AAW06403;
 XX
 DT 25-FEB-1997 (first entry)
 XX
 DE Verotoxigenic E. coli toxin (VT1) subunit A.
 XX
 KW Verotoxin; Escherichia coli; enteric infection; diarrhoea; vaccine;
 KW haemolytic uraemic syndrome; detection.
 XX

OS Escherichia coli.
 XX
 PN WO9630043-A1.
 XX
 PD 03-OCT-1996.
 XX
 PF 25-MAR-1996; 96WO-US004093.
 XX
 PR 24-MAR-1995; 95US-00410058.
 XX
 PA (OPHI-) OPHIDIAN PHARM INC.
 XX
 PI Carroll SB, Stafford DC, Padhye NV;
 XX
 DR WPI; 1996-505779/50.
 DR N-PSDB; AAT42649.
 XX
 PT Compsn. contg. neutralising antitoxin against E.coli vero-toxin - used to
 PT treat intoxicated individuals, and as a prophylactic against diarrhoeal
 PT disease or extra-intestinal complications of E.coli infection.
 XX
 PS Example 6; Page 51; 101pp; English.
 XX
 CC Compositions containing neutralising antitoxin against one or more E.
 CC coli verotoxin (VT) can be used to treat intoxicated adults and children
 CC with enteric bacterial infections. They may also be used as prophylactics
 CC e.g. as a vaccine, against diarrhoeal disease or the development of extra
 CC -intestinal complications of E.coli infection, especially haemolytic
 CC uraemic syndrome. The antitoxin can also be used to detect E. coli VT in
 CC a sample. The VT is recombinant, preferably a fusion protein containing a
 CC non-VT protein sequence and part of the E.coli VT1 or VT2 sequence
 XX
 SQ Sequence 315 AA;

Query Match 100.0%; Score 114; DB 2; Length 315;
 Best Local Similarity 100.0%; Pred. No. 1.2e-10;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
 |||||
 Db 264 CHHHASRVARMASDEFPSMC 283

RESULT 7

AAW21702

ID AAW21702 standard; protein; 315 AA.

XX

AC AAW21702;

XX

DT 17-OCT-2003 (revised)

DT 25-MAR-2003 (revised)

DT 26-SEP-1997 (first entry)

XX

DE Shiga-like toxin (SLT-1) RIP.

XX

KW pro-Ribosome Inactivating Protein; proRIP; peptide linker; cancer;

KW inactivation; eukaryotic ribosome; alpha fragment; beta fragment;

KW inhibitor; protein synthesis; N-glycosidase; glycosidic bond; liver; rat;

KW ribosomal 28S RNA; cellular proliferation; HIV-infected T cell.

XX

OS Bacteriophage H-19B.

XX

FH Key Location/Qualifiers

FT Region 145..155

FT /note= "Position of possible insertion of internal
 FT peptide linker sequence"

XX

PN US5635384-A.

XX

PD 03-JUN-1997.

XX

PF 26-JAN-1995; 95US-00378761.

XX

PR 11-JUN-1990; 90US-00535636.

PR 09-DEC-1992; 92US-00987927.

XX

PA (DOWC) DOWELANCO.
 XX
 PI Hey TD, Morgan AER, Walsh TA;
 XX
 DR WPI; 1997-309831/28.
 XX
 PT Inactive precursor of maize ribosome-inactivating protein - also chimeric
 PT ribosome-inactivating protein precursors containing internal linker
 PT sequences.
 XX
 PS Claim 2; Col 113-116; 121pp; English.
 XX
 CC The sequences given in AAW21698-710 represent Ribosome Inactivating
 CC Proteins (RIP's), which may be used in the construction of the proRIP of
 CC the invention. The proRIP has a selectively removable, internal peptide
 CC linker. The precursor sequence is incapable of inactivating eukaryotic
 CC ribosomes, but can be converted by removal of the linker into a protein
 CC having alpha and beta fragments and being capable of inactivating
 CC eukaryotic ribosomes. RIPs are potent inhibitors of eukaryotic protein
 CC synthesis. They possess a highly specific N-glycosidase activity which
 CC cleaves the glycosidic bond of adenine 4324 of rat liver ribosomal 28S
 CC RNA. RIP's selectively inhibit cellular proliferation of cells, e.g.
 CC cancer cells and HIV-infected T cells. The inactive proRIP proteins make
 CC it possible to provide protein synthesis inhibitors with uses in
 CC practical and improved ways not before possible. The RIP can be used to
 CC make cytotoxic conjugates. (Updated on 25-MAR-2003 to correct PF field.)
 CC (Updated on 17-OCT-2003 to standardise OS field)
 XX
 SQ Sequence 315 AA;

Query Match 100.0%; Score 114; DB 2; Length 315;
 Best Local Similarity 100.0%; Pred. No. 1.2e-10;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CHHHASRVARMASDEFPSMC 20
 |||||
 Db 264 CHHHASRVARMASDEFPSMC 283

RESULT 8

AAW25139

ID AAW25139 standard; protein; 315 AA.

XX

AC AAW25139;

XX

DT 25-MAR-2003 (revised)

DT 02-DEC-1997 (first entry)

XX

DE SLT-1 (a ribosome inhibitory protein) inactive precursor.

XX

KW Maize; proRIP; ribosome inactivating protein; alpha; beta subunit;

KW internal linker; Barley Translation Inhibitor; Trichosanthin;

KW Ricin A-chain; Abrin-A A-chain; Saporin; SLT-1; Luffin A; MAP;

KW Ricinus communis agglutinin; Momordin; PAP-S; Luffin-B; Dianthin 30;

KW therapeutic toxin; tumour cell targeted; protein synthesis inhibitor;

KW post-translational modification; cancer; neoplasia; HIV: AIDS;

KW human immunodeficiency virus; acquired immune deficiency syndrome.

XX

OS Synthetic.

XX

PN US5646026-A.

XX

PD 08-JUL-1997.

XX

PF 07-JUN-1995; 95US-00485286.

XX

PR 11-JUN-1990; 90US-00535636.

PR 09-DEC-1992; 92US-00987927.

PR 26-JAN-1995; 95US-00378761.

XX

PA (DOWC) DOWELANCO.

XX

PI Hey TD, Morgan AER, Walsh TA;

XX

DR WPI; 1997-362934/33.

XX

PT DNA encoding pro-ribosome inactivating proteins - inactive precursors of
PT ribosome inactivating proteins; can be expressed in eukaryotic cells
PT without causing cell death.
XX
PS Claim 4; Col 115-116; 186pp; English.
XX
CC AAW25139 represents an SLT-1 (a ribosome inhibitory protein, RIP) protein
CC which was engineered to contain a selectively removable internal peptide
CC linker sequence separating the alpha and beta units of the RIP. When
CC separated the two units regain activity and are capable of inactivating
CC eukaryotic ribosomes and hence preventing protein production. Many
CC different RIPs may be produced with an internal linker including maize
CC RIP, Trichosanthin, Ricin A-chain, Abrin-A A-chain and Saporin. The RIPs
CC can be used in the construction of therapeutic toxins targeted to
CC specific cells such as tumour cells via the attachment of a targeting
CC polypeptide, e.g. a monoclonal antibody. A further use is in HIV therapy
CC (see US4869903). There is interest in expressing RIP recombinantly in
CC host eukaryotic cells, because of the capacity to provide correct post-
CC translational processing. However, RIPs effectively inhibit protein
CC synthesis in eukaryotic cells resulting in cell death. Since the inactive
CC RIP proteins are not cytotoxic to eukaryotic cells, they can be
CC recombinantly expressed in such cells and then converted to active RIP
CC proteins. (Updated on 25-MAR-2003 to correct PF field.)
XX
SQ Sequence 315 AA;

Query Match 100.0%; Score 114; DB 2; Length 315;
Best Local Similarity 100.0%; Pred. No. 1.2e-10;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
|||||
Db 264 CHHHASRVARMASDEFPSMC 283

RESULT 9

AA96681

ID AAY96681 standard; protein; 315 AA.

XX

AC AAY96681;

XX

DT 26-SEP-2000 (first entry)

XX

DE E. coli verotoxin 1 subunit A.

XX

KW VT-1; verotoxin; antitoxin therapy; fusion protein; affinity tag; food;
KW recombinant production; screening; dairy; anti-bacterial; vaccine.

XX

OS Escherichia coli.

XX

PN US6080400-A.

XX

PD 27-JUN-2000.

XX

PF 13-MAR-1997; 97US-00816977.

XX

PR 24-MAR-1995; 95US-00410058.

XX

PA (OPHI-) OPHIDIAN PHARM INC.

XX

PI Williams JA, Byrne LM;

XX

DR WPI; 2000-451195/39.

DR

N-PSDB; AAA51194.

XX

PT Bacterial cell for recombinantly expressing bacterial toxins in large
PT quantities useful for immunization and treatment of bacterial infections,
PT comprises expression vector encoding bacterial toxin.

XX

PS Example 6; Col 69-71; 83pp; English.

XX

CC The invention relates to antitoxin therapy for humans and other animals.
CC Antitoxins which neutralize the pathologic effects of Escherichia coli
CC toxins are generated by immunization of avian hosts with recombinant
CC toxin fragments. The recombinant E. coli verotoxin (VT) is a fusion
CC protein comprising a non-verotoxin protein (especially an affinity tag)

CC fused to a portion of the VT-1 or VT-2 sequence. The VT B chains are
 CC small proteins (approximately 8 kDa), so use of a small affinity tag was
 CC preferred (i.e. polyhistidine). A polyhistidine affinity tag facilitates
 CC single step affinity purification of subunits from periplasmic extracts.
 CC However, due to poor recovery of his-tagged VT-1 A and VT-2 A chains,
 CC expression of maltose binding protein (MBP) fused subunits was
 CC undertaken. Due to the toxicity of the VT-2 B subunit, strict uninduced
 CC promoter control is necessary to permit cell viability. Bacterial host
 CC cells expressing a recombinant expression vector encoding a polyhistidine
 CC affinity tag and a portion of the VT-2 B chain are claimed. The vector is
 CC chosen from pET24hisVT2BL+, pET24hisVT2BL- and pET24VT2B, where "L+"
 CC indicates that the vector encodes the preprotein form of the protein and
 CC "L-" indicates that the vector encodes the mature form of the protein.
 CC The bacterial cell is capable of expressing large quantities (40 mg/l) of
 CC VT-2B. The toxins are useful for immunizing non-mammals and for detecting
 CC bacterial toxins in environmental samples including soil, water,
 CC industrial samples, biological samples and samples obtained from food and
 CC dairy processing instruments
 XX
 SQ Sequence 315 AA;

Query Match 100.0%; Score 114; DB 3; Length 315;
 Best Local Similarity 100.0%; Pred. No. 1.2e-10;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
 |||||
 Db 264 CHHHASRVARMASDEFPSMC 283

RESULT 10

AAU77817

ID AAU77817 standard; protein; 315 AA.

XX

AC AAU77817;

XX

DT 05-JUN-2002 (first entry)

XX

DE E. coli verotoxin VT1-A chain protein.

XX

KW Verotoxin; VT1-A; antitoxin; antidiarrheal; antibacterial; haemostatic;
 KW vaccine; haemorrhagic cystitis; balantitis; haemolytic uremic syndrome;
 KW thrombotic thrombocytopenic purpura.

XX

OS Escherichia coli.

XX

PN US2002012658-A1.

XX

PD 31-JAN-2002.

XX

PF 16-JUN-1999; 99US-00334477.

XX

PR 13-MAR-1997; 97US-00816977.

XX

PA (WILL/) WILLIAMS J A.

PA (BYRN/) BYRNE L M.

PA (PUGH/) PUGH C S G.

XX

PI Williams JA, Byrne LM, Pugh CSG;

XX

DR WPI; 2002-205094/26.

DR N-PSDB; ABK11775.

XX

PT New recombinant expression vector encoding affinity tag and Escherichia
 PT coli type 1 or type 2 verotoxin, useful for treating or preventing
 PT diseases due to E. coli verotoxins and in producing vaccines.

XX

PS Example 6; Page 38-39; 98pp; English.

XX

CC This invention relates to a recombinant expression vector encoding an
 CC affinity tag and protein comprising at least a portion of a bacterial
 CC toxin consisting of Escherichia coli type 1 or type 2 verotoxin. The
 CC expression vector can be used to produce recombinant verotoxin protein
 CC which can be used to create a vaccine against diseases caused by E. coli
 CC such as verotoxin haemorrhagic cystitis and balantitis. The antitoxins
 CC are useful for treating humans and animals intoxicated with a bacterial

CC toxin, particularly E. coli verotoxin. The antitoxins may also be used in
 CC the preventative treatment and in diagnostic assays to detect the
 CC presence of a toxin in a sample. The polypeptides derived from E. coli
 CC verotoxins are useful as immunogens for the production of vaccines,
 CC including multivalent vaccines and antitoxins, which can be administered
 CC to a subject at risk of diarrhoeal disease or at risk of developing extra
 CC -intestinal complications of E. coli infections, e.g. haemolytic uremic
 CC syndrome, thrombotic thrombocytopenic purpura. The present sequence
 CC represents the E.coli verotoxin protein VT1-A used to create the
 CC expression vectors of the invention
 XX
 SQ Sequence 315 AA;

Query Match 100.0%; Score 114; DB 5; Length 315;
 Best Local Similarity 100.0%; Pred. No. 1.2e-10;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
 |||||
 Db 264 CHHHASRVARMASDEFPSMC 283

RESULT 11

ADC00545

ID ADC00545 standard; protein; 315 AA.

XX

AC ADC00545;

XX

DT 04-DEC-2003 (first entry)

XX

DE Enterohaemorrhagic E. coli O157:H7-specific protein SEQ ID NO: 590.

XX

KW enterohaemorrhagic; anti-bacterial.

XX

OS Escherichia coli; O157:H7.

XX

PN JP2002355074-A.

XX

PD 10-DEC-2002.

XX

PF 24-JAN-2002; 2002JP-00015959.

XX

PR 24-JAN-2001; 2001JP-00112010.

XX

PA (UYTS-) UNIV TSUKUBA.

XX

DR WPI; 2003-451640/43.

XX

PT Enterohemorrhagic Escherichia coli O157:H7-specific nucleic acid molecule

PT and a polypeptide and its use, a polypeptide, a vector and a host cell.

XX

PS Claim 3; SEQ ID NO 590; 2067pp; Japanese.

XX

CC The invention relates to a novel enterohaemorrhagic Escherichia coli
 CC O157:H7-specific nucleic acid molecule. A polynucleotide of the invention
 CC has anti-bacterial activity. The polypeptide can be used in detection
 CC and/or treatment of O157:H7 infection. The nucleotide sequence of the
 CC genome of Enterohaemorrhagic E coli O157:H7 was determined. The present
 CC sequence represents an E. coli O157:H7-specific polypeptide of the
 CC invention.

XX

SQ Sequence 315 AA;

Query Match 100.0%; Score 114; DB 7; Length 315;
 Best Local Similarity 100.0%; Pred. No. 1.2e-10;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
 |||||
 Db 264 CHHHASRVARMASDEFPSMC 283

RESULT 12

ADH34319

ID ADH34319 standard; protein; 315 AA.

XX

AC ADH34319;
 XX
 DT 11-MAR-2004 (first entry)
 XX
 DE Verotoxin 1 (VT1) A subunit.
 XX
 KW Attenuated verotoxin; attenuated VT; mutant A subunit; troponin I;
 KW fusion protein; cancer; cytostatic; verotoxin 1; VT1; A subunit.
 XX
 OS Escherichia coli; O157:H7.
 XX
 PN WO2003066854-A1.
 XX
 PD 14-AUG-2003.
 XX
 PF 03-FEB-2003; 2003WO-JP001043.
 XX
 PR 04-FEB-2002; 2002JP-00026577.
 XX
 PA (YOSH/) YOSHIDA H.
 XX
 PI Yoshida H, Liu X;
 XX
 DR WPI; 2003-646309/61.
 XX
 PT Attenuated verotoxin controls tumor growth for treatment of cancer.
 XX
 PS Disclosure; Fig 3; 56pp; Japanese.
 XX
 CC The invention relates to attenuated verotoxins (VTs) comprising mutations
 CC in one or more of the regions spanning residues 167-172 or 202-207 of the
 CC mature verotoxin A subunit. The invention also relates to the mutant
 CC verotoxin A subunit and the DNA encoding it; anticancer agents containing
 CC the novel mutant A subunit; a fusion protein comprising the mutant
 CC verotoxin A subunit and a ligand, especially troponin I, which binds to a
 CC cancer cell; a fusion gene encoding the mutant A subunit/troponin I
 CC fusion protein; and vectors encoding either the mutant verotoxin A
 CC subunit, or the fusion gene of the invention. The attenuated verotoxins,
 CC A subunits, fusion proteins, and polynucleotides encoding them are useful
 CC in the treatment of cancer. The present sequence represents the A subunit
 CC of verotoxin 1 (VT1).
 XX
 SQ Sequence 315 AA;

Query Match 100.0%; Score 114; DB 7; Length 315;
 Best Local Similarity 100.0%; Pred. No. 1.2e-10;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
 |||||
 Db 264 CHHHASRVARMASDEFPSMC 283

RESULT 13 AEF18888

ID AEF18888 standard; protein; 315 AA.
 XX
 AC AEF18888;
 XX
 DT 09-MAR-2006 (first entry)
 XX
 DE Shiga toxin, SEQ:28.
 XX
 KW Transgenic plant; plant fungal disease; disease-resistance;
 KW pathogen resistance; trichothecene; ribosome inactivating protein;
 KW Shiga toxin; transgenic.
 XX
 OS Bacteriophage SC370..
 XX
 PN US2006005271-A1.
 XX
 PD 05-JAN-2006.
 XX
 PF 13-DEC-2004; 2004US-00010795.
 XX
 PR 12-DEC-2003; 2003US-0529348P.

XX
PA (RUTF) UNIV RUTGERS STATE NEW JERSEY.
XX
PI Tumer NE, Di R;
XX
DR WPI; 2006-078100/08.
DR N-PSDB; AEF18887.
XX
PT New transgenic plant that exhibits increased resistance to toxins
PT targeting eukaryotic ribosomal L3 protein compared to a non-transgenic
PT control plant, useful for providing resistance against trichothecene
PT fungal toxins.
XX
PS Disclosure; SEQ ID NO 28; 93pp; English.
XX
CC The invention relates to a transgenic plant comprising an exogenous
CC nucleic acid encoding at least the first 21 to 99 N-terminal amino acids
CC of a full length eukaryotic ribosomal protein L3 and which exhibits
CC increased resistance to toxins (such as trichothecene fungal toxins) that
CC target the eukaryotic ribosomal protein L3. The exogenous nucleic acid
CC may further encode a ribosome inactivating protein (RIP) that targets a
CC eukaryotic L3 ribosomal protein e.g., Pokeweed Antiviral Protein (PAP),
CC its variants PAP-v and PAP-II, or ricin or Shiga toxin. The invention
CC also relates to seed derived from the transgenic plant, and to a method
CC of producing transgenic plants of the invention which have increased
CC resistance to infestation by fungi that produce toxins that target the
CC eukaryotic L3 protein. The transgenic plants of the invention are
CC resistant to trichothecene mycotoxins such as those produced by Fusarium
CC species. The N-terminal L3 protein fragment confers better resistance to
CC trichothecenes than the full-length protein, although it does not contain
CC the trichodermin resistance mutation tcm-1 (W255C) of yeast L3 which is
CC known to confer resistance to trichothecenes. Also, when co-expressed
CC with a RIP, the N-terminal L3 protein fragment reduces or eliminates the
CC toxicity associated with RIP expression, meaning that RIPs such as wild-
CC type PAP can be expressed at much higher levels in plants of the
CC invention compared to plants which express the wild-type PAP alone. In
CC addition, PAP does not autoregulate (i.e., degrade its own mRNA) in the
CC presence of L3 N-terminal fragments, resulting in higher expression and
CC increased resistance to fungal diseases, and does not depurinate the RNA
CC of the cell, resulting in less toxicity. The present sequence represents
CC a Shiga toxin which can optionally be expressed by a transgenic plant of
CC the invention.
XX
SQ Sequence 315 AA;

Query Match 100.0%; Score 114; DB 10; Length 315;
Best Local Similarity 100.0%; Pred. No. 1.2e-10;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
|||||
Db 264 CHHHASRVARMASDEFPSMC 283

RESULT 14
AAW25786

ID AAW25786 standard; protein; 316 AA.
XX
AC AAW25786;
XX
DT 17-OCT-2003 (revised)
DT 25-MAR-2003 (revised)
DT 27-MAR-1998 (first entry)
XX
DE Phage H19B shiga-like toxin.
XX
KW Shiga-like toxin; slt-A gene; hybrid protein; cell delivery;
KW cell binding ligand; translocation domain; diphtheria toxin B';
KW interleukin-2; T-cell lymphoma; organ rejection; therapy; ss.
XX
OS Bacteriophage H-19B.
XX
PN US5668255-A.
XX
PD 16-SEP-1997.
XX

PF 04-AUG-1993; 93US-00102387.
 XX
 PR 07-JUN-1984; 84US-00618199.
 PR 25-APR-1985; 85US-00726808.
 PR 07-JUN-1985; 85US-00742554.
 PR 22-DEC-1989; 89US-00456095.
 PR 14-JUN-1990; 90US-00538276.
 PR 27-JUN-1991; 91US-00722484.
 XX
 PA (SERA-) SERAGEN INC.
 XX
 PI Murphy JR;
 XX
 DR WPI; 1997-470103/43.
 DR N-PSDB; AAT91637.
 XX
 PT New hybrid molecules for delivery of agents to cells - comprise a binding
 PT domain of a cell binding ligand and a portion of a trans-location domain
 PT of a protein.
 XX
 PS Example 3; Fig 8A-C; 30pp; English.
 XX
 CC This protein comprises the Escherichia coli phage H19B Shiga-like toxin.
 CC DNA (see AAT91637) encoding the A subunit of the Shiga-like toxin was
 CC used to construct a Shiga-like toxin A-diphtheria toxin B'-interleukin-2
 CC (SLTA-DTB'-IL2) gene that was expressed in E. coli. The hybrid protein
 CC can be isolated and used to treat conditions involving over-production of
 CC cells bearing IL2 receptors, such as certain T-cell lymphomas and organ
 CC transplant rejection crises. The hybrid inactivates ribosomes in cells
 CC bearing IL2 receptors, resulting in cessation of protein synthesis and
 CC death of target cells. Claimed hybrid proteins comprise a translocation
 CC domain and a cell binding domain from e.g. a hormone, growth factor or
 CC protein toxin. The hybrid molecules can be used for the delivery of
 CC agents (e.g. therapeutic genes, toxins, detectable labels) into cells.
 CC The use of a translocation mechanism ensures that the hybrid will be
 CC effective in relatively low doses, since a high proportion of the
 CC substance of interest will be taken into the targeted cells. The hybrid
 CC molecules can be manufactured as a single hybrid recombinant protein,
 CC permitting reproducibility, consistency, and the precise control of
 CC composition. (Updated on 25-MAR-2003 to correct PF field.) (Updated on 17
 CC -OCT-2003 to standardise OS field)
 XX
 SQ Sequence 316 AA;

Query Match 100.0%; Score 114; DB 2; Length 316;
 Best Local Similarity 100.0%; Pred. No. 1.2e-10;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSC 20
 |||||
 Db 264 CHHHASRVARMASDEFPSC 283

RESULT 15
 AAW06407

ID AAW06407 standard; protein; 323 AA.
 XX
 AC AAW06407;
 XX
 DT 25-FEB-1997 (first entry)
 XX
 DE Histidine tagged verotoxigenic E. coli toxin (VT1) subunit A.
 XX
 KW Verotoxin; Escherichia coli; enteric infection; diarrhoea; vaccine;
 KW haemolytic uraemic syndrome; detection.
 XX
 OS Escherichia coli.
 XX
 PN W09630043-A1.
 XX
 PD 03-OCT-1996.
 XX
 PF 25-MAR-1996; 96WO-US004093.
 XX
 PR 24-MAR-1995; 95US-00410058.
 XX

PA (OPHI-) OPHIDIAN PHARM INC.
 XX
 PI Carroll SB, Stafford DC, Padhye NV;
 XX
 DR WPI; 1996-505779/50.
 DR N-PSDB; AAT42663.
 XX
 PT Compsn. contg. neutralising antitoxin against E.coli vero-toxin - used to
 PT treat intoxicated individuals, and as a prophylactic against diarrhoeal
 PT disease or extra-intestinal complications of E.coli infection.
 XX
 PS Example 6; Page 61-62; 101pp; English.
 XX
 CC Compositions containing neutralising antitoxin against one or more E.
 CC coli verotoxin (VT) can be used to treat intoxicated adults and children
 CC with enteric bacterial infections. They may also be used as prophylactics
 CC e.g. as a vaccine, against diarrhoeal disease or the development of extra
 CC -intestinal complications of E.coli infection, especially haemolytic
 CC uraemic syndrome. The antitoxin can also be used to detect E. coli VT in
 CC a sample. The VT is recombinant, preferably a fusion protein containing a
 CC non-VT protein sequence and part of the E.coli VT1 or VT2 sequence. This
 CC is a histidine tagged version of subunit A of VT1 as expressed from the
 CC vector pET-23b
 XX
 SQ Sequence 323 AA;

Query Match 100.0%; Score 114; DB 2; Length 323;
 Best Local Similarity 100.0%; Pred. No. 1.2e-10;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
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 Db 264 CHHHASRVARMASDEFPSMC 283

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 Job time : 18.1993 secs

SCORE 1.3 BuildDate: 12/06/2005

SCORE Search Results Details for Application 10717243 and Search Result us-10-717-243-56.ra1.

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OM protein - protein search, using sw model

Run on: July 20, 2006, 09:37:31 ; Search time 2.69373 Seconds
(without alignments)
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Searched: 650591 seqs, 87530628 residues

Total number of hits satisfying chosen parameters: 650591

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Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	114	100.0	20	1	US-07-988-430-58	Sequence 58, Appl
2	114	100.0	20	1	US-08-425-336-56	Sequence 56, Appl
3	114	100.0	20	1	US-08-488-113B-56	Sequence 56, Appl
4	114	100.0	20	1	US-08-477-484B-56	Sequence 56, Appl
5	114	100.0	20	1	US-08-646-360-56	Sequence 56, Appl
6	114	100.0	20	2	US-08-839-765-56	Sequence 56, Appl
7	114	100.0	20	2	US-09-136-389-56	Sequence 56, Appl
8	114	100.0	20	2	US-09-610-838-56	Sequence 56, Appl
9	114	100.0	20	2	US-09-711-485-56	Sequence 56, Appl
10	114	100.0	20	5	PCT-US92-09487-58	Sequence 58, Appl

11	114	100.0	315	1	US-08-378-761A-73	Sequence 73, Appl
12	114	100.0	315	1	US-08-485-286-73	Sequence 73, Appl
13	114	100.0	315	2	US-08-816-977-2	Sequence 2, Appli
14	114	100.0	315	2	US-09-334-477-2	Sequence 2, Appli
15	114	100.0	323	2	US-08-816-977-21	Sequence 21, Appl
16	114	100.0	323	2	US-09-334-477-21	Sequence 21, Appl
17	114	100.0	326	2	US-08-816-977-37	Sequence 37, Appl
18	114	100.0	326	2	US-09-334-477-37	Sequence 37, Appl
19	114	100.0	332	1	US-08-621-803-251	Sequence 251, App
20	114	100.0	332	2	US-09-217-352-251	Sequence 251, App
21	114	100.0	690	2	US-08-816-977-47	Sequence 47, Appl
22	114	100.0	690	2	US-09-334-477-47	Sequence 47, Appl
23	114	100.0	708	2	US-08-816-977-33	Sequence 33, Appl
24	114	100.0	708	2	US-09-334-477-33	Sequence 33, Appl
25	47	41.2	135	1	US-08-757-036-3	Sequence 3, Appli
26	46	40.4	204	2	US-09-252-991A-18665	Sequence 18665, A
27	45	39.5	413	2	US-09-328-352-5860	Sequence 5860, Ap
28	45	39.5	525	2	US-09-252-991A-28266	Sequence 28266, A
29	44	38.6	138	1	US-08-757-036-1	Sequence 1, Appli
30	44	38.6	297	1	US-08-180-761B-2	Sequence 2, Appli
31	44	38.6	318	2	US-08-816-977-6	Sequence 6, Appli
32	44	38.6	318	2	US-09-334-477-6	Sequence 6, Appli
33	44	38.6	319	1	US-08-180-761B-1	Sequence 1, Appli
34	44	38.6	326	2	US-08-816-977-25	Sequence 25, Appl
35	44	38.6	326	2	US-09-334-477-25	Sequence 25, Appl
36	44	38.6	329	2	US-08-816-977-39	Sequence 39, Appl
37	44	38.6	329	2	US-09-334-477-39	Sequence 39, Appl
38	44	38.6	360	2	US-09-252-991A-28104	Sequence 28104, A
39	44	38.6	433	2	US-09-344-882-26	Sequence 26, Appl
40	44	38.6	433	2	US-10-293-865-26	Sequence 26, Appl
41	44	38.6	450	2	US-09-252-991A-24440	Sequence 24440, A
42	44	38.6	575	2	US-09-107-532A-3910	Sequence 3910, Ap
43	44	38.6	694	2	US-08-816-977-49	Sequence 49, Appl
44	44	38.6	694	2	US-09-334-477-49	Sequence 49, Appl
45	44	38.6	711	2	US-08-816-977-35	Sequence 35, Appl

ALIGNMENTS

RESULT 1
US-07-988-430-58
; Sequence 58, Application US/07988430
; Patent No. 5416202
; GENERAL INFORMATION:
; APPLICANT: Bernhard, Susan L.
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Lane, Julie A.
; APPLICANT: Lei, Shau-Ping
; TITLE OF INVENTION: Materials Comprising and Methods of
; TITLE OF INVENTION: Preparation and Use for Ribosome-Inactivating Proteins
; NUMBER OF SEQUENCES: 101
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray &
; ADDRESSEE: Bicknell
; STREET: Two First National Plaza, 20 South Clark
; STREET: Street
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60603
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/988,430
; FILING DATE: 19921209
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567

```

; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: No. 5416202and, Greta E.
; REGISTRATION NUMBER: 35302
; REFERENCE/DOCKET NUMBER: 31133
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (312) 346-5750
; TELEFAX: (312) 984-9740
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 58:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 20 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-07-988-430-58

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Query Match      100.0%; Score 114; DB 1; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.4e-12;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 CHHHASRVARMASDEFPSMC 20
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Db      1 CHHHASRVARMASDEFPSMC 20

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RESULT 2

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US-08-425-336-56
; Sequence 56, Application US/08425336
; Patent No. 5621083
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 140
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/425,336
; FILING DATE: 18-APR-1995
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/064,691
; FILING DATE: 12-MAY-1993
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Meyers, Thomas C.
; REGISTRATION NUMBER: P-36,989
; REFERENCE/DOCKET NUMBER: 31394
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 56:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 20 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-425-336-56

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Query Match 100.0%; Score 114; DB 1; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.4e-12;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
| | | | | | | | | | | | | | | | | | | | | |
Db 1 CHHHASRVARMASDEFPSMC 20

RESULT 3

US-08-488-113B-56

; Sequence 56, Application US/08488113B

; Patent No. 5744580

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; APPLICANT: Carroll, Stephen F.

; APPLICANT: Studnika, Gary M.

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating

; TITLE OF INVENTION: Proteins

; NUMBER OF SEQUENCES: 169

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: McAndrews, Held & Malloy, Ltd.

; STREET: 500 West Madison Street, 34th floor

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60661

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/488,113B

; FILING DATE: 07-JUN-1995

; CLASSIFICATION: 530

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/425,336

; FILING DATE: 18-APR-1995

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/064,691

; FILING DATE: 12-MAY-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/988,430

; FILING DATE: 09-DEC-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/901,707

; FILING DATE: 19-JUN-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/787,567

; FILING DATE: 04-NOV-1991

; ATTORNEY/AGENT INFORMATION:

; NAME: McNicholas, Janet M.

; REGISTRATION NUMBER: 32,918

; REFERENCE/DOCKET NUMBER: 11022US07/200-70.P3.C2A

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 312/707-8889

; TELEFAX: 312/707-9155

; TELEX: 650 388-1248

; INFORMATION FOR SEQ ID NO: 56:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 20 amino acids

; TYPE: amino acid

; TOPOLOGY: linear

; MOLECULE TYPE: peptide

US-08-488-113B-56

Query Match 100.0%; Score 114; DB 1; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.4e-12;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
| | | | | | | | | | | | | | | | | | | | | |
Db 1 CHHHASRVARMASDEFPSMC 20

RESULT 4
 US-08-477-484B-56
 ; Sequence 56, Application US/08477484B
 ; Patent No. 5756699
 ; GENERAL INFORMATION:
 ; APPLICANT: Better, Marc D.
 ; APPLICANT: Carroll, Stephen F.
 ; APPLICANT: Studnika, Gary M.
 ; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
 ; TITLE OF INVENTION: Proteins
 ; NUMBER OF SEQUENCES: 169
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
 ; STREET: 500 West Madison Street, 34th floor
 ; CITY: Chicago
 ; STATE: Illinois
 ; COUNTRY: USA
 ; ZIP: 60661
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: PatentIn Release #1.0, Version #1.25
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/477,484B
 ; FILING DATE: 07-JUN-1995
 ; CLASSIFICATION: 530
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/425,336
 ; FILING DATE: 18-APR-1995
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/064,691
 ; FILING DATE: 12-MAY-1993
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 07/988,430
 ; FILING DATE: 09-DEC-1992
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 07/901,707
 ; FILING DATE: 19-JUN-1992
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 07/787,567
 ; FILING DATE: 04-NOV-1991
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: McNicholas, Janet M.
 ; REGISTRATION NUMBER: 32,918
 ; REFERENCE/DOCKET NUMBER: 11022US07/200-70.P3.C2A
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: 312/707-8889
 ; TELEFAX: 312/707-9155
 ; TELEX: 650 388-1248
 ; INFORMATION FOR SEQ ID NO: 56:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 20 amino acids
 ; TYPE: amino acid
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: peptide
 US-08-477-484B-56

Query Match 100.0%; Score 114; DB 1; Length 20;
 Best Local Similarity 100.0%; Pred. No. 2.4e-12;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
 |||||
 Db 1 CHHHASRVARMASDEFPSMC 20

RESULT 5
 US-08-646-360-56
 ; Sequence 56, Application US/08646360
 ; Patent No. 5837491
 ; GENERAL INFORMATION:
 ; APPLICANT: Better, Marc D.
 ; APPLICANT: Carroll, Stephen F.
 ; APPLICANT: Studnika, Gary M.

```

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 173
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/646,360
; FILING DATE: 13-MAY-1996
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/US94/05348
; FILING DATE: 12-MAY-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 200-70.P4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 56:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 20 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-646-360-56

```

```

Query Match          100.0%; Score 114; DB 1; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.4e-12;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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```

Qy      1 CHHHASRVARMASDEFPSMC 20
        ||||||||||||||||
Db      1 CHHHASRVARMASDEFPSMC 20

```

RESULT 6

```

US-08-839-765-56
; Sequence 56, Application US/08839765
; Patent No. 6146631
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 169
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA

```

```

; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/839,765
; FILING DATE: 15-APR-1997
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/425,336
; FILING DATE: 18-APR-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 11022US09/200-70.P3.C3
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 56:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 20 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-839-765-56

```

```

Query Match      100.0%; Score 114; DB 2; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.4e-12;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

```

Qy      1 CHHHASRVARMASDEFPSMC 20
        ||||||||||||||||
Db      1 CHHHASRVARMASDEFPSMC 20

```

RESULT 7

US-09-136-389-56

```

; Sequence 56, Application US/09136389
; Patent No. 6146850
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 173
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/136,389
; FILING DATE:

```

```

; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/646,360
; FILING DATE: 13-MAY-1996
; APPLICATION NUMBER: PCT/US94/05348
; FILING DATE: 12-MAY-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 200-70.P4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 56:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 20 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-09-136-389-56

```

```

Query Match          100.0%; Score 114; DB 2; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.4e-12;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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```

Qy      1 CHHHASRVARMASDEFPSMC 20
        ||||||||||||||||
Db      1 CHHHASRVARMASDEFPSMC 20

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RESULT 8

US-09-610-838-56

```

; Sequence 56, Application US/09610838
; Patent No. 6376217

```

GENERAL INFORMATION:

```

; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 173
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661

```

COMPUTER READABLE FORM:

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; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25

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CURRENT APPLICATION DATA:

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; APPLICATION NUMBER: US/09/610,838
; FILING DATE: 06-JUL-2000
; CLASSIFICATION:

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PRIOR APPLICATION DATA:

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; APPLICATION NUMBER: US/09/136,389
; FILING DATE: 18-AUG-1998
; APPLICATION NUMBER: 08/646,360
; FILING DATE: 13-MAY-1996
; APPLICATION NUMBER: PCT/US94/05348

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; FILING DATE: 12-MAY-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 200-70.P4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 56:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 20 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-09-610-838-56

```

```

Query Match          100.0%; Score 114; DB 2; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.4e-12;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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```

Qy      1 CHHHASRVARMASDEFPSMC 20
        |||
Db      1 CHHHASRVARMASDEFPSMC 20

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RESULT 9

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US-09-711-485-56
; Sequence 56, Application US/09711485
; Patent No. 6649742
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 169
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/711,485
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/839,765
; FILING DATE:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707

```

```

; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 11022US09/200-70.P3.C3
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 56:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 20 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-09-711-485-56

```

```

Query Match      100.0%; Score 114; DB 2; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.4e-12;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

```

Qy      1 CHHHASRVARMASDEFPSMC 20
        | | | | | | | | | | | | | | | |
Db      1 CHHHASRVARMASDEFPSMC 20

```

RESULT 10

PCT-US92-09487-58

; Sequence 58, Application PC/TUS9209487

; GENERAL INFORMATION:

```

; APPLICANT: Bernhard, Susan L.
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Lane, Julie A.
; APPLICANT: Lei, Shau-Ping
; TITLE OF INVENTION: Materials Comprising and Methods of
; TITLE OF INVENTION: Preparation and Use for Ribosome-Inactivating Proteins
; NUMBER OF SEQUENCES: 101
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray &
; ADDRESSEE: Bicknell
; STREET: Two First National Plaza, 20 South Clark
; STREET: Street
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60603

```

; COMPUTER READABLE FORM:

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; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25

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; CURRENT APPLICATION DATA:

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; APPLICATION NUMBER: PCT/US92/09487
; FILING DATE: 19921104
; CLASSIFICATION:

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; PRIOR APPLICATION DATA:

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; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992

```

; PRIOR APPLICATION DATA:

```

; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991

```

; ATTORNEY/AGENT INFORMATION:

```

; NAME: Noland, Greta E.
; REGISTRATION NUMBER: 35302
; REFERENCE/DOCKET NUMBER: 31133

```

; TELECOMMUNICATION INFORMATION:

```

; TELEPHONE: (312) 346-5750
; TELEFAX: (312) 984-9740
; TELEX: 25-3856

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; INFORMATION FOR SEQ ID NO: 58:

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; SEQUENCE CHARACTERISTICS:
; LENGTH: 20 amino acids

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; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
PCT-US92-09487-58

Query Match 100.0%; Score 114; DB 5; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.4e-12;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
| | | | | | | | | | | | | | | | | |
Db 1 CHHHASRVARMASDEFPSMC 20

RESULT 11

US-08-378-761A-73

; Sequence 73, Application US/08378761A
; Patent No. 5635384

; GENERAL INFORMATION:

; APPLICANT: WALSH, TERENCE A
; APPLICANT: HEY, TIMOTHY D
; APPLICANT: MORGAN, ALICE ER
; TITLE OF INVENTION: RIBOSOME-INACTIVATING PROTEINS, INACTIVE
; TITLE OF INVENTION: PRECURSOR FORMS THEREOF, A PROCESS FOR MAKING A METHOD OF
; TITLE OF INVENTION: USING
; NUMBER OF SEQUENCES: 81
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: ANDREA T. BORUCKI
; STREET: 9330 ZIONSVILLE ROAD
; CITY: INDIANAPOLIS
; STATE: IN
; COUNTRY: US
; ZIP: 46268

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/378,761A
; FILING DATE: 26-JAN-1995
; CLASSIFICATION: 435

; ATTORNEY/AGENT INFORMATION:

; NAME: BORUCKI, ANDREA T
; REGISTRATION NUMBER: 33651
; REFERENCE/DOCKET NUMBER: 38272B

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: (317) 337-4846

; INFORMATION FOR SEQ ID NO: 73:

; SEQUENCE CHARACTERISTICS:
; LENGTH: 315 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein

US-08-378-761A-73

Query Match 100.0%; Score 114; DB 1; Length 315;
Best Local Similarity 100.0%; Pred. No. 6e-11;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
| | | | | | | | | | | | | | | | | |
Db 264 CHHHASRVARMASDEFPSMC 283

RESULT 12

US-08-485-286-73

; Sequence 73, Application US/08485286
; Patent No. 5646026

; Patent No. 5646026 5646119

; GENERAL INFORMATION:

; APPLICANT: WALSH, TERENCE A
; APPLICANT: HEY, TIMOTHY D
; APPLICANT: MORGAN, ALICE ER
; TITLE OF INVENTION: RIBOSOME-INACTIVATING PROTEINS, INACTIVE

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; TITLE OF INVENTION: PRECURSOR FORMS THEREOF, A PROCESS FOR MAKING A METHOD OF
; TITLE OF INVENTION: USING
; NUMBER OF SEQUENCES: 81
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: ANDREA T. BORUCKI
; STREET: 9330 ZIONSVILLE ROAD
; CITY: INDIANAPOLIS
; STATE: IN
; COUNTRY: US
; ZIP: 46268
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/485,286
; FILING DATE:
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/378761
; FILING DATE: 26-JAN-1995
; ATTORNEY/AGENT INFORMATION:
; NAME: BORUCKI, ANDREA T
; REGISTRATION NUMBER: 33651
; REFERENCE/DOCKET NUMBER: 38272B
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (317) 337-4846
; INFORMATION FOR SEQ ID NO: 73:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 315 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-485-286-73

```

```

Query Match      100.0%; Score 114; DB 1; Length 315;
Best Local Similarity 100.0%; Pred. No. 6e-11;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 CHHHASRVARMASDEFPSMC 20
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Db      264 CHHHASRVARMASDEFPSMC 283

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RESULT 13
US-08-816-977-2
; Sequence 2, Application US/08816977
; Patent No. 6080400
; GENERAL INFORMATION:
; APPLICANT: Williams, James A.
; APPLICANT: Byrne, Lisa M.
; APPLICANT: Pugh, Charles S.G.
; TITLE OF INVENTION: Prevention And Treatment Of
; TITLE OF INVENTION: Verotoxin-Induced Disease
; NUMBER OF SEQUENCES: 49
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Medlen & Carroll, LLP
; STREET: 220 Montgomery Street, Suite 2200
; CITY: San Francisco
; STATE: California
; COUNTRY: United States of America
; ZIP: 94104
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/816,977
; FILING DATE: 13-MAR-1997
; CLASSIFICATION: 424
; ATTORNEY/AGENT INFORMATION:
; NAME: MacKnight, Kamrin T.
; REGISTRATION NUMBER: 38,230

```



```

; REFERENCE/DOCKET NUMBER: OPHD-02450
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 705-8410
; TELEFAX: (415) 397-8338
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 315 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-816-977-2

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Query Match          100.0%; Score 114; DB 2; Length 315;
Best Local Similarity 100.0%; Pred. No. 6e-11;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 CHHHASRVARMASDEFPSMC 20
        ||||||||||||||||
Db      264 CHHHASRVARMASDEFPSMC 283

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RESULT 14

US-09-334-477-2

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; Sequence 2, Application US/09334477
; Patent No. 6652857

```

GENERAL INFORMATION:

```

; APPLICANT: Williams, James A.
;           Byrne, Lisa M.
;           Pugh, Charles S.G.
; TITLE OF INVENTION: Prevention And Treatment Of
;                   Verotoxin-Induced Disease

```

NUMBER OF SEQUENCES: 49

CORRESPONDENCE ADDRESS:

```

; ADDRESSEE: Medlen & Carroll, LLP
; STREET: 220 Montgomery Street, Suite 2200
; CITY: San Francisco
; STATE: California
; COUNTRY: United States of America
; ZIP: 94104

```

COMPUTER READABLE FORM:

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; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30

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CURRENT APPLICATION DATA:

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; APPLICATION NUMBER: US/09/334,477
; FILING DATE: 16-Jun-1999
; CLASSIFICATION:

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PRIOR APPLICATION DATA:

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; APPLICATION NUMBER: 08/816,977
; FILING DATE:

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ATTORNEY/AGENT INFORMATION:

```

; NAME: MacKnight, Kamrin T.
; REGISTRATION NUMBER: 38,230
; REFERENCE/DOCKET NUMBER: OPHD-02450

```

TELECOMMUNICATION INFORMATION:

```

; TELEPHONE: (415) 705-8410
; TELEFAX: (415) 397-8338

```

INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:

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; LENGTH: 315 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein

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SEQUENCE DESCRIPTION: SEQ ID NO: 2:

US-09-334-477-2

```

Query Match          100.0%; Score 114; DB 2; Length 315;
Best Local Similarity 100.0%; Pred. No. 6e-11;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 CHHHASRVARMASDEFPSMC 20
        ||||||||||||||||
Db      264 CHHHASRVARMASDEFPSMC 283

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RESULT 15
 US-08-816-977-21
 ; Sequence 21, Application US/08816977
 ; Patent No. 6080400
 ; GENERAL INFORMATION:
 ; APPLICANT: Williams, James A.
 ; APPLICANT: Byrne, Lisa M.
 ; APPLICANT: Pugh, Charles S.G.
 ; TITLE OF INVENTION: Prevention And Treatment Of
 ; TITLE OF INVENTION: Verotoxin-Induced Disease
 ; NUMBER OF SEQUENCES: 49
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Medlen & Carroll, LLP
 ; STREET: 220 Montgomery Street, Suite 2200
 ; CITY: San Francisco
 ; STATE: California
 ; COUNTRY: United States of America
 ; ZIP: 94104
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: PatentIn Release #1.0, Version #1.30
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/816,977
 ; FILING DATE: 13-MAR-1997
 ; CLASSIFICATION: 424
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: MacKnight, Kamrin T.
 ; REGISTRATION NUMBER: 38,230
 ; REFERENCE/DOCKET NUMBER: OPHD-02450
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (415) 705-8410
 ; TELEFAX: (415) 397-8338
 ; INFORMATION FOR SEQ ID NO: 21:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 323 amino acids
 ; TYPE: amino acid
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: protein
 US-08-816-977-21

Query Match 100.0%; Score 114; DB 2; Length 323;
 Best Local Similarity 100.0%; Pred. No. 6.2e-11;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
 |||||
 Db 264 CHHHASRVARMASDEFPSMC 283

Search completed: July 20, 2006, 09:38:56
 Job time : 3.69373 secs

SCORE 1.3 BuildDate: 12/06/2005

SCORE Search Results Details for Application 10717243 and Search Result us-10-717-243-56.rapbm.

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[Retrieve Application List](#)
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[Comments / Suggestions](#)

This page gives you Search Results detail for the Application 10717243 and Search Result us-10-717-243-56.rapbm.

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OM protein - protein search, using sw model

Run on: July 20, 2006, 09:40:12 ; Search time 6.49446 Seconds
(without alignments)
1426.491 Million cell updates/sec

Title: US-10-717-243-56
Perfect score: 114
Sequence: 1 CHHHASRVARMASDEFPSMC 20

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2097797 seqs, 463214858 residues

Total number of hits satisfying chosen parameters: 2097797

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_AA_Main:*
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5: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*
6: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US11_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	114	100.0	20	4 US-10-127-890-56	Sequence 56, Appl
2	114	100.0	20	5 US-10-717-243-56	Sequence 56, Appl
3	114	100.0	293	3 US-09-792-793A-37	Sequence 37, Appl
4	114	100.0	293	4 US-10-375-209A-37	Sequence 37, Appl
5	114	100.0	315	3 US-09-334-477-2	Sequence 2, Appli
6	114	100.0	315	6 US-11-010-795-28	Sequence 28, Appl
7	114	100.0	323	3 US-09-334-477-21	Sequence 21, Appl
8	114	100.0	326	3 US-09-334-477-37	Sequence 37, Appl
9	114	100.0	332	3 US-09-765-527-251	Sequence 251, App
10	114	100.0	690	3 US-09-334-477-47	Sequence 47, Appl
11	114	100.0	708	3 US-09-334-477-33	Sequence 33, Appl

12	48	42.1	96	4	US-10-425-115-237717	Sequence 237717,
13	48	42.1	162	4	US-10-767-701-40168	Sequence 40168, A
14	47	41.2	74	4	US-10-424-599-224605	Sequence 224605,
15	47	41.2	135	3	US-09-962-021-3	Sequence 3, Appli
16	47	41.2	135	4	US-10-408-765A-20	Sequence 20, Appl
17	47	41.2	293	5	US-10-732-923-4254	Sequence 4254, Ap
18	47	41.2	294	4	US-10-437-963-194718	Sequence 194718,
19	46.5	40.8	345	4	US-10-424-599-200140	Sequence 200140,
20	46	40.4	19	5	US-10-502-882-10	Sequence 10, Appl
21	46	40.4	196	4	US-10-282-122A-66424	Sequence 66424, A
22	46	40.4	378	6	US-11-087-099-11797	Sequence 11797, A
23	45	39.5	380	4	US-10-437-963-116579	Sequence 116579,
24	44.5	39.0	250	4	US-10-369-493-10325	Sequence 10325, A
25	44.5	39.0	251	6	US-11-188-298-9123	Sequence 9123, Ap
26	44.5	39.0	275	4	US-10-425-115-220907	Sequence 220907,
27	44.5	39.0	280	4	US-10-425-114-52863	Sequence 52863, A
28	44.5	39.0	544	3	US-09-925-299-1004	Sequence 1004, Ap
29	44.5	39.0	544	3	US-09-925-299-1004	Sequence 1004, Ap
30	44	38.6	82	4	US-10-424-599-216625	Sequence 216625,
31	44	38.6	137	4	US-10-408-765A-1100	Sequence 1100, Ap
32	44	38.6	138	3	US-09-962-021-1	Sequence 1, Appli
33	44	38.6	249	4	US-10-156-761-13851	Sequence 13851, A
34	44	38.6	286	5	US-10-732-923-14451	Sequence 14451, A
35	44	38.6	293	4	US-10-424-599-223435	Sequence 223435,
36	44	38.6	318	3	US-09-334-477-6	Sequence 6, Appli
37	44	38.6	319	3	US-09-792-793A-38	Sequence 38, Appl
38	44	38.6	319	3	US-09-870-759-28	Sequence 28, Appl
39	44	38.6	319	3	US-09-751-708A-28	Sequence 28, Appl
40	44	38.6	319	4	US-10-375-209A-38	Sequence 38, Appl
41	44	38.6	319	4	US-10-428-817A-24	Sequence 24, Appl
42	44	38.6	319	5	US-10-937-758A-28	Sequence 28, Appl
43	44	38.6	319	5	US-10-503-415-2	Sequence 2, Appli
44	44	38.6	319	6	US-11-010-795-26	Sequence 26, Appl
45	44	38.6	326	3	US-09-334-477-25	Sequence 25, Appl

ALIGNMENTS

RESULT 1

US-10-127-890-56

; Sequence 56, Application US/10127890

; Publication No. US20030166196A1

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; Carroll, Stephen F.

; Studnika, Gary M.

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; Proteins

; NUMBER OF SEQUENCES: 173

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: McAndrews, Held & Malloy, Ltd.

; STREET: 500 West Madison Street, 34th floor

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60661

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/10/127,890

; FILING DATE: 23-Apr-2002

; CLASSIFICATION:

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US/08/646,360

; FILING DATE: 13-MAY-1996

; APPLICATION NUMBER: PCT/US94/05348

; FILING DATE: 12-MAY-1994

; APPLICATION NUMBER: US 08/064,691

; FILING DATE: 12-MAY-1993

; APPLICATION NUMBER: US 07/988,430

; FILING DATE: 09-DEC-1992

; APPLICATION NUMBER: US 07/901,707

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; FILING DATE: 19-JUN-1992
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 200-70.P4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 56:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 20 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; SEQUENCE DESCRIPTION: SEQ ID NO: 56:
US-10-127-890-56

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Query Match          100.0%; Score 114; DB 4; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.1e-10;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 CHHHASRVARMASDEFPSMC 20
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Db      1 CHHHASRVARMASDEFPSMC 20

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RESULT 2

US-10-717-243-56

; Sequence 56, Application US/10717243

; Publication No. US20050054835A1

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; Carroll, Stephen F.

; Studnika, Gary M.

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; Proteins

; NUMBER OF SEQUENCES: 169

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: McAndrews, Held & Malloy, Ltd.

; STREET: 500 West Madison Street, 34th floor

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60661

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/10717,243

; FILING DATE: 18-Nov-2003

; CLASSIFICATION: 530

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US/08/839,765

; FILING DATE: 15-APR-1997

; APPLICATION NUMBER: US 08/425,336

; FILING DATE: 18-APR-1995

; APPLICATION NUMBER: US 08/064,691

; FILING DATE: 12-MAY-1993

; APPLICATION NUMBER: US 07/988,430

; FILING DATE: 09-DEC-1992

; APPLICATION NUMBER: US 07/901,707

; FILING DATE: 19-JUN-1992

; APPLICATION NUMBER: US 07/787,567

; FILING DATE: 04-NOV-1991

; ATTORNEY/AGENT INFORMATION:

; NAME: McNicholas, Janet M.

; REGISTRATION NUMBER: 32,918

; REFERENCE/DOCKET NUMBER: 11022US09/200-70.P3.C3

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 312/707-8889

; TELEFAX: 312/707-9155

TELEX: 650 388-1248
INFORMATION FOR SEQ ID NO: 56:
SEQUENCE CHARACTERISTICS:
LENGTH: 20 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
SEQUENCE DESCRIPTION: SEQ ID NO: 56:
US-10-717-243-56

Query Match 100.0%; Score 114; DB 5; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.1e-10;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
|
Db 1 CHHHASRVARMASDEFPSMC 20

RESULT 3

US-09-792-793A-37
; Sequence 37, Application US/09792793A
; Patent No. US20020168370A1
; GENERAL INFORMATION:
; APPLICANT: McDonald, John R.
; APPLICANT: Coggins, Philip
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR TREATING SECONDARY TISSUE DAMAGE AND
; TITLE OF INVENTION: OTHER INFLAMMATORY CONDITIONS AND DISORDERS
; FILE REFERENCE: 25020-601D
; CURRENT APPLICATION NUMBER: US/09/792,793A
; CURRENT FILING DATE: 2001-02-22
; NUMBER OF SEQ ID NOS: 93
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 37
; LENGTH: 293
; TYPE: PRT
; ORGANISM: Shigella dysenteriae
US-09-792-793A-37

Query Match 100.0%; Score 114; DB 3; Length 293;
Best Local Similarity 100.0%; Pred. No. 1.9e-09;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
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Db 242 CHHHASRVARMASDEFPSMC 261

RESULT 4

US-10-375-209A-37
; Sequence 37, Application US/10375209A
; Publication No. US20030215421A1
; GENERAL INFORMATION:
; APPLICANT: McDonald, John R.
; APPLICANT: Coggins, Philip
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR TREATING SECONDARY TISSUE DAMAGE AND
; TITLE OF INVENTION: OTHER INFLAMMATORY CONDITIONS AND DISORDERS
; FILE REFERENCE: 25020-601E
; CURRENT APPLICATION NUMBER: US/10/375,209A
; CURRENT FILING DATE: 2003-02-24
; NUMBER OF SEQ ID NOS: 93
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 37
; LENGTH: 293
; TYPE: PRT
; ORGANISM: Shigella dysenteriae
US-10-375-209A-37

Query Match 100.0%; Score 114; DB 4; Length 293;
Best Local Similarity 100.0%; Pred. No. 1.9e-09;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
|
Db 242 CHHHASRVARMASDEFPSMC 261

RESULT 5
 US-09-334-477-2
 ; Sequence 2, Application US/09334477
 ; Patent No. US20020012658A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Williams, James A.
 ; Byrne, Lisa M.
 ; Pugh, Charles S.G.
 ; TITLE OF INVENTION: Prevention And Treatment Of
 ; Verotoxin-Induced Disease
 ; NUMBER OF SEQUENCES: 49
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Medlen & Carroll, LLP
 ; STREET: 220 Montgomery Street, Suite 2200
 ; CITY: San Francisco
 ; STATE: California
 ; COUNTRY: United States of America
 ; ZIP: 94104
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: PatentIn Release #1.0, Version #1.30
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/09/334,477
 ; FILING DATE: 16-Jun-1999
 ; CLASSIFICATION:
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: 08/816,977
 ; FILING DATE:
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: MacKnight, Kamrin T.
 ; REGISTRATION NUMBER: 38,230
 ; REFERENCE/DOCKET NUMBER: OPHD-02450
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (415) 705-8410
 ; TELEFAX: (415) 397-8338
 ; INFORMATION FOR SEQ ID NO: 2:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 315 amino acids
 ; TYPE: amino acid
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: protein
 ; SEQUENCE DESCRIPTION: SEQ ID NO: 2:
 US-09-334-477-2

Query Match 100.0%; Score 114; DB 3; Length 315;
 Best Local Similarity 100.0%; Pred. No. 2e-09;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
 |||||
 Db 264 CHHHASRVARMASDEFPSMC 283

RESULT 6
 US-11-010-795-28
 ; Sequence 28, Application US/11010795
 ; Publication No. US20060005271A1
 ; GENERAL INFORMATION:
 ; APPLICANT: TUMER, NILGUN E.
 ; APPLICANT: DI, RONG
 ; TITLE OF INVENTION: TRANSGENIC PLANTS EXPRESSING L3 DELTA PROTEINS ARE
 ; TITLE OF INVENTION: RESISTANT TO TRICHOTHECENE FUNGAL TOXINS
 ; FILE REFERENCE: OCIRS 3.0-085
 ; CURRENT APPLICATION NUMBER: US/11/010,795
 ; CURRENT FILING DATE: 2004-12-13
 ; PRIOR APPLICATION NUMBER: 60/529,348
 ; PRIOR FILING DATE: 2003-12-12
 ; NUMBER OF SEQ ID NOS: 44
 ; SOFTWARE: PatentIn Ver. 3.3
 ; SEQ ID NO 28
 ; LENGTH: 315
 ; TYPE: PRT
 ; ORGANISM: Bacteriophage SC370

US-11-010-795-28

Query Match 100.0%; Score 114; DB 6; Length 315;
Best Local Similarity 100.0%; Pred. No. 2e-09;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
|||||
Db 264 CHHHASRVARMASDEFPSMC 283

RESULT 7

US-09-334-477-21
; Sequence 21, Application US/09334477
; Patent No. US20020012658A1
; GENERAL INFORMATION:
; APPLICANT: Williams, James A.
; Byrne, Lisa M.
; Pugh, Charles S.G.
; TITLE OF INVENTION: Prevention And Treatment Of
; Verotoxin-Induced Disease
; NUMBER OF SEQUENCES: 49
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Medlen & Carroll, LLP
; STREET: 220 Montgomery Street, Suite 2200
; CITY: San Francisco
; STATE: California
; COUNTRY: United States of America
; ZIP: 94104
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/334,477
; FILING DATE: 16-Jun-1999
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/816,977
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: MacKnight, Kamrin T.
; REGISTRATION NUMBER: 38,230
; REFERENCE/DOCKET NUMBER: OPHD-02450
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 705-8410
; TELEFAX: (415) 397-8338
; INFORMATION FOR SEQ ID NO: 21:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 323 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 21:
US-09-334-477-21

Query Match 100.0%; Score 114; DB 3; Length 323;
Best Local Similarity 100.0%; Pred. No. 2.1e-09;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
|||||
Db 264 CHHHASRVARMASDEFPSMC 283

RESULT 8

US-09-334-477-37
; Sequence 37, Application US/09334477
; Patent No. US20020012658A1
; GENERAL INFORMATION:
; APPLICANT: Williams, James A.
; Byrne, Lisa M.
; Pugh, Charles S.G.
; TITLE OF INVENTION: Prevention And Treatment Of
; Verotoxin-Induced Disease


```

; NUMBER OF SEQUENCES: 49
; CORRESPONDENCE ADDRESS:
;   ADDRESSEE: Medlen & Carroll, LLP
;   STREET: 220 Montgomery Street, Suite 2200
;   CITY: San Francisco
;   STATE: California
;   COUNTRY: United States of America
;   ZIP: 94104
; COMPUTER READABLE FORM:
;   MEDIUM TYPE: Floppy disk
;   COMPUTER: IBM PC compatible
;   OPERATING SYSTEM: PC-DOS/MS-DOS
;   SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
;   APPLICATION NUMBER: US/09/334,477
;   FILING DATE: 16-Jun-1999
;   CLASSIFICATION:
; PRIOR APPLICATION DATA:
;   APPLICATION NUMBER: 08/816,977
;   FILING DATE:
; ATTORNEY/AGENT INFORMATION:
;   NAME: MacKnight, Kamrin T.
;   REGISTRATION NUMBER: 38,230
;   REFERENCE/DOCKET NUMBER: OPHD-02450
; TELECOMMUNICATION INFORMATION:
;   TELEPHONE: (415) 705-8410
;   TELEFAX: (415) 397-8338
; INFORMATION FOR SEQ ID NO: 37:
;   SEQUENCE CHARACTERISTICS:
;     LENGTH: 327 amino acids
;     TYPE: amino acid
;     TOPOLOGY: linear
;   MOLECULE TYPE: protein
;   SEQUENCE DESCRIPTION: SEQ ID NO: 37:
US-09-334-477-37

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Query Match          100.0%; Score 114; DB 3; Length 326;
Best Local Similarity 100.0%; Pred. No. 2.1e-09;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 CHHHASRVARMASDEFPSMC 20
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Db      275 CHHHASRVARMASDEFPSMC 294

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RESULT 9

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US-09-765-527-251
; Sequence 251, Application US/09765527
; Patent No. US20020006638A1
; GENERAL INFORMATION:
;   APPLICANT: Better, Marc D.
;   TITLE OF INVENTION: Methods for Recombinant Microbial Production of
;                       Fusion Proteins and BPI-Derived Peptides
;   NUMBER OF SEQUENCES: 265
;   CORRESPONDENCE ADDRESS:
;     ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
;     STREET: 6300 Sears Tower, 233 South Wacker Drive
;     CITY: Chicago
;     STATE: Illinois
;     COUNTRY: United States of America
;     ZIP: 60606-6402
;   COMPUTER READABLE FORM:
;     MEDIUM TYPE: Floppy disk
;     COMPUTER: IBM PC compatible
;     OPERATING SYSTEM: PC-DOS/MS-DOS
;     SOFTWARE: PatentIn Release #1.0, Version #1.25
;   CURRENT APPLICATION DATA:
;     APPLICATION NUMBER: US/09/765,527
;     FILING DATE: 18-Jan-2001
;   PRIOR APPLICATION DATA:
;     APPLICATION NUMBER: 08/621,803
;     FILING DATE:
;   ATTORNEY/AGENT INFORMATION:
;     NAME: Borun, Michael F.
;     REGISTRATION NUMBER: 25,447
;     REFERENCE/DOCKET NUMBER: 27129/33199

```

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; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 251:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 332 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 251:
US-09-765-527-251

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Query Match      100.0%; Score 114; DB 3; Length 332;
Best Local Similarity 100.0%; Pred. No. 2.1e-09;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 CHHHASRVARMASDEFPSMC 20
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Db      277 CHHHASRVARMASDEFPSMC 296

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RESULT 10

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US-09-334-477-47
; Sequence 47, Application US/09334477
; Patent No. US20020012658A1
; GENERAL INFORMATION:
; APPLICANT: Williams, James A.
;           Byrne, Lisa M.
;           Pugh, Charles S.G.
; TITLE OF INVENTION: Prevention And Treatment Of
;                   Verotoxin-Induced Disease
; NUMBER OF SEQUENCES: 49
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Medlen & Carroll, LLP
; STREET: 220 Montgomery Street, Suite 2200
; CITY: San Francisco
; STATE: California
; COUNTRY: United States of America
; ZIP: 94104
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/334,477
; FILING DATE: 16-Jun-1999
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/816,977
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: MacKnight, Kamrin T.
; REGISTRATION NUMBER: 38,230
; REFERENCE/DOCKET NUMBER: OPHD-02450
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 705-8410
; TELEFAX: (415) 397-8338
; INFORMATION FOR SEQ ID NO: 47:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 690 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 47:
US-09-334-477-47

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Query Match      100.0%; Score 114; DB 3; Length 690;
Best Local Similarity 100.0%; Pred. No. 4.6e-09;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 CHHHASRVARMASDEFPSMC 20
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Db      639 CHHHASRVARMASDEFPSMC 658

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RESULT 11
 US-09-334-477-33
 ; Sequence 33, Application US/09334477
 ; Patent No. US20020012658A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Williams, James A.
 ; Byrne, Lisa M.
 ; Pugh, Charles S.G.
 ; TITLE OF INVENTION: Prevention And Treatment Of
 ; Verotoxin-Induced Disease
 ; NUMBER OF SEQUENCES: 49
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Medlen & Carroll, LLP
 ; STREET: 220 Montgomery Street, Suite 2200
 ; CITY: San Francisco
 ; STATE: California
 ; COUNTRY: United States of America
 ; ZIP: 94104
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: PatentIn Release #1.0, Version #1.30
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/09/334,477
 ; FILING DATE: 16-Jun-1999
 ; CLASSIFICATION:
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: 08/816,977
 ; FILING DATE:
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: MacKnight, Kamrin T.
 ; REGISTRATION NUMBER: 38,230
 ; REFERENCE/DOCKET NUMBER: OPHD-02450
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (415) 705-8410
 ; TELEFAX: (415) 397-8338
 ; INFORMATION FOR SEQ ID NO: 33:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 709 amino acids
 ; TYPE: amino acid
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: protein
 ; SEQUENCE DESCRIPTION: SEQ ID NO: 33:
 US-09-334-477-33

Query Match 100.0%; Score 114; DB 3; Length 708;
 Best Local Similarity 100.0%; Pred. No. 4.8e-09;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
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 Db 657 CHHHASRVARMASDEFPSMC 676

RESULT 12
 US-10-425-115-237717
 ; Sequence 237717, Application US/10425115
 ; Publication No. US20040214272A1
 ; GENERAL INFORMATION:
 ; APPLICANT: La Rosa, Thomas J.
 ; APPLICANT: Kovalic, David K.
 ; APPLICANT: Zhou, Yihua
 ; APPLICANT: Cao, Yongwei
 ; TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
 ; TITLE OF INVENTION: Plants
 ; FILE REFERENCE: 38-21(53222)B
 ; CURRENT APPLICATION NUMBER: US/10/425,115
 ; CURRENT FILING DATE: 2003-04-28
 ; NUMBER OF SEQ ID NOS: 369326
 ; SEQ ID NO 237717
 ; LENGTH: 96
 ; TYPE: PRT
 ; ORGANISM: Zea mays
 ; FEATURE:

; OTHER INFORMATION: Clone ID: MRT4577_148383C.1.pep
US-10-425-115-237717

Query Match 42.1%; Score 48; DB 4; Length 96;
Best Local Similarity 50.0%; Pred. No. 12;
Matches 7; Conservative 4; Mismatches 3; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASD 14
| | | | : | : | : |
Db 82 CHHHLARLSGSATD 95

RESULT 13

US-10-767-701-40168
; Sequence 40168, Application US/10767701
; Publication No. US20040172684A1
; GENERAL INFORMATION:
; APPLICANT: Kovalic, David K.
; APPLICANT: Zhou, Yihua
; APPLICANT: Cao, Yongwei
; TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
; TITLE OF INVENTION: Plants and Uses Thereof For Plant Improvement
; FILE REFERENCE: 38-21(53535)B
; CURRENT APPLICATION NUMBER: US/10/767,701
; CURRENT FILING DATE: 2004-01-29
; NUMBER OF SEQ ID NOS: 63128
; SEQ ID NO 40168
; LENGTH: 162
; TYPE: PRT
; ORGANISM: Sorghum bicolor
; FEATURE:
; OTHER INFORMATION: Clone ID: SORBI-28MAY03-C46914_1.pep
US-10-767-701-40168

Query Match 42.1%; Score 48; DB 4; Length 162;
Best Local Similarity 44.4%; Pred. No. 21;
Matches 8; Conservative 2; Mismatches 8; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPS 18
| : | | | | : | | |
Db 44 CYHHHDNYAATVSTDFPS 61

RESULT 14

US-10-424-599-224605
; Sequence 224605, Application US/10424599
; Publication No. US20040031072A1
; GENERAL INFORMATION:
; APPLICANT: La Rosa Thomas J
; APPLICANT: Kovalic David K
; APPLICANT: Zhou Yihua
; APPLICANT: Cao Yongwei
; TITLE OF INVENTION: Soy Nucleic Acid Molecules and Other Molecules Associated With
; TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
; FILE REFERENCE: 38-21(53223)B
; CURRENT APPLICATION NUMBER: US/10/424,599
; CURRENT FILING DATE: 2003-04-28
; NUMBER OF SEQ ID NOS: 285684
; SEQ ID NO 224605
; LENGTH: 74
; TYPE: PRT
; ORGANISM: Glycine max
; FEATURE:
; OTHER INFORMATION: Clone ID: PAT_MRT3847_44849C.1.pep
US-10-424-599-224605

Query Match 41.2%; Score 47; DB 4; Length 74;
Best Local Similarity 50.0%; Pred. No. 13;
Matches 8; Conservative 3; Mismatches 5; Indels 0; Gaps 0;

Qy 2 HHHASRVARMASDEFP 17
| | | : | : | : |
Db 58 HGHGSKVSTLASSNFP 73

RESULT 15

US-09-962-021-3
 ; Sequence 3, Application US/09962021
 ; Patent No. US20020106737A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Hillman, Jennifer L.
 ; APPLICANT: Goli, Surya K.
 ; TITLE OF INVENTION: HUMAN SQM1 PROTEIN HOMOLOG
 ; FILE REFERENCE: PF-0170-2 CON
 ; CURRENT APPLICATION NUMBER: US/09/962,021
 ; CURRENT FILING DATE: 2001-09-21
 ; NUMBER OF SEQ ID NOS: 4
 ; SOFTWARE: PERL Program
 ; SEQ ID NO 3
 ; LENGTH: 135
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 ; FEATURE:
 ; NAME/KEY: misc_feature
 ; OTHER INFORMATION: Incyte ID No. US20020106737A1 g180233
 US-09-962-021-3

Query Match 41.2%; Score 47; DB 3; Length 135;
 Best Local Similarity 44.4%; Pred. No. 25;
 Matches 8; Conservative 2; Mismatches 8; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPS 18
 | | | | : | | |
 Db 58 CAHHLIRLLKCKRDSFPS 75

Search completed: July 20, 2006, 09:43:18
 Job time : 7.49446 secs

SCORE 1.3 BuildDate: 12/06/2005

SCORE Search Results Details for Application 10717243 and Search Result us-10-717-243-56.rapbn.

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OM protein - protein search, using sw model

Run on: July 20, 2006, 09:40:39 ; Search time 1.18081 Seconds
(without alignments)
976.754 Million cell updates/sec

Title: US-10-717-243-56
Perfect score: 114
Sequence: 1 CHHHASRVARMASDEFPSMC 20

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 208217 seqs, 57668156 residues

Total number of hits satisfying chosen parameters: 208217

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_AA_New:*
1: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
2: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
3: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US07_NEW_PUB.pep:*
4: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US08_NEW_PUB.pep:*
5: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*
6: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
7: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US11_NEW_PUB.pep:*
8: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US60_NEW_PUB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Match	Query Length	DB ID	Description
1	44	38.6	419	7	US-11-056-355B-78105 Sequence 78105, A
2	44	38.6	430	7	US-11-056-355B-78104 Sequence 78104, A
3	44	38.6	433	7	US-11-056-355B-78103 Sequence 78103, A
4	43	37.7	175	7	US-11-056-355B-17381 Sequence 17381, A
5	43	37.7	313	6	US-10-449-902-45435 Sequence 45435, A
6	43	37.7	691	6	US-10-511-937-2568 Sequence 2568, Ap
7	43	37.7	691	7	US-11-293-697-4345 Sequence 4345, Ap
8	42	36.8	141	7	US-11-056-355B-107028 Sequence 107028, A
9	42	36.8	141	7	US-11-056-355B-118267 Sequence 118267, A

10	42	36.8	142	6	US-10-953-349-2640	Sequence 2640, Ap
11	42	36.8	142	7	US-11-056-355B-39187	Sequence 39187, A
12	42	36.8	142	7	US-11-056-355B-48973	Sequence 48973, A
13	42	36.8	142	7	US-11-056-355B-101571	Sequence 101571,
14	42	36.8	142	7	US-11-056-355B-112810	Sequence 112810,
15	42	36.8	244	7	US-11-056-355B-107027	Sequence 107027,
16	42	36.8	244	7	US-11-056-355B-118266	Sequence 118266,
17	42	36.8	245	6	US-10-953-349-2639	Sequence 2639, Ap
18	42	36.8	245	7	US-11-056-355B-39186	Sequence 39186, A
19	42	36.8	245	7	US-11-056-355B-48972	Sequence 48972, A
20	42	36.8	245	7	US-11-056-355B-101570	Sequence 101570,
21	42	36.8	245	7	US-11-056-355B-112809	Sequence 112809,
22	42	36.8	252	7	US-11-056-355B-101569	Sequence 101569,
23	42	36.8	252	7	US-11-056-355B-112808	Sequence 112808,
24	42	36.8	273	7	US-11-056-355B-107026	Sequence 107026,
25	42	36.8	273	7	US-11-056-355B-118265	Sequence 118265,
26	42	36.8	777	7	US-11-293-697-3189	Sequence 3189, Ap
27	41	36.0	230	6	US-10-449-902-49282	Sequence 49282, A
28	41	36.0	366	7	US-11-056-355B-80990	Sequence 80990, A
29	41	36.0	387	7	US-11-056-355B-80989	Sequence 80989, A
30	41	36.0	400	6	US-10-953-349-7204	Sequence 7204, Ap
31	41	36.0	408	6	US-10-953-349-7203	Sequence 7203, Ap
32	41	36.0	412	6	US-10-953-349-7202	Sequence 7202, Ap
33	41	36.0	437	6	US-10-504-120-32	Sequence 32, Appl
34	41	36.0	444	7	US-11-056-355B-80988	Sequence 80988, A
35	40	35.1	270	6	US-10-505-928-805	Sequence 805, App
36	40	35.1	270	6	US-10-449-902-40832	Sequence 40832, A
37	40	35.1	310	7	US-11-056-355B-18267	Sequence 18267, A
38	40	35.1	354	7	US-11-056-355B-18266	Sequence 18266, A
39	40	35.1	377	7	US-11-056-355B-18265	Sequence 18265, A
40	40	35.1	411	7	US-11-056-355B-50091	Sequence 50091, A
41	40	35.1	418	7	US-11-056-355B-77816	Sequence 77816, A
42	40	35.1	463	6	US-10-449-902-37660	Sequence 37660, A
43	40	35.1	477	7	US-11-056-355B-50090	Sequence 50090, A
44	40	35.1	484	7	US-11-056-355B-77815	Sequence 77815, A
45	40	35.1	493	6	US-10-953-349-2205	Sequence 2205, Ap

ALIGNMENTS

RESULT 1

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US-11-056-355B-78105
; Sequence 78105, Application US/11056355B
; Publication No. US20060150283A1
; GENERAL INFORMATION:
; APPLICANT: Brover, Vyacheslav
; APPLICANT: Alexandrov, Nickolai
; TITLE OF INVENTION: Sequence Determined DNA Fragments and Corresponding
; TITLE OF INVENTION: Polypeptides Encoded Thereby
; FILE REFERENCE: 2750-1590PUS2
; CURRENT APPLICATION NUMBER: US/11/056,355B
; CURRENT FILING DATE: 2005-02-14
; PRIOR APPLICATION NUMBER: 60/544,190
; PRIOR FILING DATE: 2004-02-13
; NUMBER OF SEQ ID NOS: 119966
; SEQ ID NO 78105
; LENGTH: 419
; TYPE: prt
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: peptide
; LOCATION: (1)..(419)
; OTHER INFORMATION: Ceres Seq. ID no. 12605737
US-11-056-355B-78105

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Query Match      38.6%; Score 44; DB 7; Length 419;
Best Local Similarity 41.2%; Pred. No. 27;
Matches      7; Conservative      5; Mismatches      5; Indels      0; Gaps      0;

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Qy      3 HHASRVARMASDEFPSM 19
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Db      251 HHVQRLSRLSDPRPTI 267

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RESULT 2

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US-11-056-355B-78104
; Sequence 78104, Application US/11056355B
; Publication No. US20060150283A1
; GENERAL INFORMATION:
; APPLICANT: Brover, Vyacheslav
; APPLICANT: Alexandrov, Nickolai
; TITLE OF INVENTION: Sequence Determined DNA Fragments and Corresponding
; TITLE OF INVENTION: Polypeptides Encoded Thereby
; FILE REFERENCE: 2750-1590PUS2
; CURRENT APPLICATION NUMBER: US/11/056,355B
; CURRENT FILING DATE: 2005-02-14
; PRIOR APPLICATION NUMBER: 60/544,190
; PRIOR FILING DATE: 2004-02-13
; NUMBER OF SEQ ID NOS: 119966
; SEQ ID NO 78104
; LENGTH: 430
; TYPE: prt
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: peptide
; LOCATION: (1)..(430)
; OTHER INFORMATION: Ceres Seq. ID no. 12605736
US-11-056-355B-78104

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Query Match          38.6%; Score 44; DB 7; Length 430;
Best Local Similarity 41.2%; Pred. No. 28;
Matches      7; Conservative      5; Mismatches      5; Indels      0; Gaps      0;

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Qy      3 HHASRVARMASDEFPSM 19
        || |::|: || |::
Db      262 HHVQRLSRLSDPRPTI 278

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RESULT 3

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US-11-056-355B-78103
; Sequence 78103, Application US/11056355B
; Publication No. US20060150283A1
; GENERAL INFORMATION:
; APPLICANT: Brover, Vyacheslav
; APPLICANT: Alexandrov, Nickolai
; TITLE OF INVENTION: Sequence Determined DNA Fragments and Corresponding
; TITLE OF INVENTION: Polypeptides Encoded Thereby
; FILE REFERENCE: 2750-1590PUS2
; CURRENT APPLICATION NUMBER: US/11/056,355B
; CURRENT FILING DATE: 2005-02-14
; PRIOR APPLICATION NUMBER: 60/544,190
; PRIOR FILING DATE: 2004-02-13
; NUMBER OF SEQ ID NOS: 119966
; SEQ ID NO 78103
; LENGTH: 433
; TYPE: prt
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: peptide
; LOCATION: (1)..(433)
; OTHER INFORMATION: Ceres Seq. ID no. 12605735
US-11-056-355B-78103

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Query Match          38.6%; Score 44; DB 7; Length 433;
Best Local Similarity 41.2%; Pred. No. 28;
Matches      7; Conservative      5; Mismatches      5; Indels      0; Gaps      0;

```

```

Qy      3 HHASRVARMASDEFPSM 19
        || |::|: || |::
Db      265 HHVQRLSRLSDPRPTI 281

```

RESULT 4

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US-11-056-355B-17381
; Sequence 17381, Application US/11056355B
; Publication No. US20060150283A1
; GENERAL INFORMATION:
; APPLICANT: Brover, Vyacheslav
; APPLICANT: Alexandrov, Nickolai
; TITLE OF INVENTION: Sequence Determined DNA Fragments and Corresponding
; TITLE OF INVENTION: Polypeptides Encoded Thereby

```



```

; FILE REFERENCE: 2750-1590PUS2
; CURRENT APPLICATION NUMBER: US/11/056,355B
; CURRENT FILING DATE: 2005-02-14
; PRIOR APPLICATION NUMBER: 60/544,190
; PRIOR FILING DATE: 2004-02-13
; NUMBER OF SEQ ID NOS: 119966
; SEQ ID NO 17381
; LENGTH: 175
; TYPE: prt
; ORGANISM: Zea mays subsp. mays
; FEATURE:
; NAME/KEY: peptide
; LOCATION: (1)..(175)
; OTHER INFORMATION: Ceres Seq. ID no. 12360562
US-11-056-355B-17381

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Query Match          37.7%; Score 43; DB 7; Length 175;
Best Local Similarity 47.1%; Pred. No. 16;
Matches      8; Conservative    4; Mismatches    5; Indels      0; Gaps      0;

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Qy      3 HHASRVARMASDEFPSM 19
        :||| :|| :| ||:
Db      106 NHASMMARSVTDSPSV 122

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RESULT 5

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US-10-449-902-45435
; Sequence 45435, Application US/10449902
; Publication No. US20060123505A1
; GENERAL INFORMATION:
; APPLICANT: National Institute of Agrobiological Sciences.
; APPLICANT: Bio-oriented Technology Research Advancement Institution.
; APPLICANT: The Institute of Physical and Chemical Research.
; APPLICANT: Foundation for Advancement of International Science.
; TITLE OF INVENTION: FULL-LENGTH PLANT cDNA AND USES THEREOF
; FILE REFERENCE: MOA-A0205Y1-US
; CURRENT APPLICATION NUMBER: US/10/449,902
; CURRENT FILING DATE: 2003-05-29
; PRIOR APPLICATION NUMBER: JP 2002-203269
; PRIOR FILING DATE: 2002-05-30
; PRIOR APPLICATION NUMBER: JP 2002-383870
; PRIOR FILING DATE: 2002-12-11
; NUMBER OF SEQ ID NOS: 56791
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 45435
; LENGTH: 313
; TYPE: PRT
; ORGANISM: Oryza sativa
US-10-449-902-45435

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Query Match          37.7%; Score 43; DB 6; Length 313;
Best Local Similarity 35.0%; Pred. No. 29;
Matches      7; Conservative    2; Mismatches   11; Indels      0; Gaps      0;

```

```

Qy      1 CHHHASRVARMASDEFPSMC 20
        | || | | | : :|
Db      14 CQHHQERQAATAGESAKKLC 33

```

RESULT 6

```

US-10-511-937-2568
; Sequence 2568, Application US/10511937
; Publication No. US20060088836A1
; GENERAL INFORMATION:
; APPLICANT: EXPRESSION DIAGNOSTICS, INC.
; APPLICANT: Wohlgemuth, Jay
; APPLICANT: Fry, Kirk
; APPLICANT: Woodward, Robert
; APPLICANT: Ly, Ngoc
; APPLICANT: Prentice, James
; APPLICANT: Morris, MacDonald
; APPLICANT: Rosenberg, Steven
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR DIAGNOSING
; TITLE OF INVENTION: AND MONITORING TRANSPLANT REJECTION
; FILE REFERENCE: 506612000104
; CURRENT APPLICATION NUMBER: US/10/511,937

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; CURRENT FILING DATE: 2004-10-19
; PRIOR APPLICATION NUMBER: PCT/US2003/012946
; PRIOR FILING DATE: 2003-04-24
; PRIOR APPLICATION NUMBER: US 10/131,831
; PRIOR FILING DATE: 2002-04-24
; PRIOR APPLICATION NUMBER: US 10/325,899
; PRIOR FILING DATE: 2002-12-20
; NUMBER OF SEQ ID NOS: 3117
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 2568
; LENGTH: 691
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-511-937-2568

Query Match 37.7%; Score 43; DB 6; Length 691;
Best Local Similarity 33.3%; Pred. No. 65;
Matches 8; Conservative 4; Mismatches 8; Indels 4; Gaps 1;

Qy 1 CHHHASRVARM----ASDEFPSC 20
||| :|:: :||| |
Db 87 CHTHEKKAKLLEINSDDDESPECC 110

RESULT 7

US-11-293-697-4345
; Sequence 4345, Application US/11293697
; Publication No. US20060105376A1
; GENERAL INFORMATION:
; APPLICANT: HELIX RESEARCH INSTITUTE
; TITLE OF INVENTION: Novel full length cDNA
; FILE REFERENCE: H1-A0106
; CURRENT APPLICATION NUMBER: US/11/293,697
; CURRENT FILING DATE: 2005-12-05
; PRIOR APPLICATION NUMBER: US/10/108,260
; PRIOR FILING DATE: 2002-03-28
; NUMBER OF SEQ ID NOS: 5458
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4345
; LENGTH: 691
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-293-697-4345

Query Match 37.7%; Score 43; DB 7; Length 691;
Best Local Similarity 33.3%; Pred. No. 65;
Matches 8; Conservative 4; Mismatches 8; Indels 4; Gaps 1;

Qy 1 CHHHASRVARM----ASDEFPSC 20
||| :|:: :||| |
Db 87 CHTHEKKAKLLEINSDDDESPECC 110

RESULT 8

US-11-056-355B-107028
; Sequence 107028, Application US/11056355B
; Publication No. US20060150283A1
; GENERAL INFORMATION:
; APPLICANT: Brover, Vyacheslav
; APPLICANT: Alexandrov, Nickolai
; TITLE OF INVENTION: Sequence Determined DNA Fragments and Corresponding
; TITLE OF INVENTION: Polypeptides Encoded Thereby
; FILE REFERENCE: 2750-1590PUS2
; CURRENT APPLICATION NUMBER: US/11/056,355B
; CURRENT FILING DATE: 2005-02-14
; PRIOR APPLICATION NUMBER: 60/544,190
; PRIOR FILING DATE: 2004-02-13
; NUMBER OF SEQ ID NOS: 119966
; SEQ ID NO 107028
; LENGTH: 141
; TYPE: prt
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: peptide
; LOCATION: (1)..(141)
; OTHER INFORMATION: Ceres Seq. ID no. 13621190

US-11-056-355B-107028

Query Match 36.8%; Score 42; DB 7; Length 141;
Best Local Similarity 42.1%; Pred. No. 18;
Matches 8; Conservative 3; Mismatches 8; Indels 0; Gaps 0;

Qy 2 HHHASRVARMASDEFFPSMC 20
||:| |: | ||:
Db 117 HHNGSPVSLAPSPVIP SVC 135

RESULT 9

US-11-056-355B-118267
; Sequence 118267, Application US/11056355B
; Publication No. US20060150283A1
; GENERAL INFORMATION:
; APPLICANT: Brover, Vyacheslav
; APPLICANT: Alexandrov, Nickolai
; TITLE OF INVENTION: Sequence Determined DNA Fragments and Corresponding
; TITLE OF INVENTION: Polypeptides Encoded Thereby
; FILE REFERENCE: 2750-1590PUS2
; CURRENT APPLICATION NUMBER: US/11/056,355B
; CURRENT FILING DATE: 2005-02-14
; PRIOR APPLICATION NUMBER: 60/544,190
; PRIOR FILING DATE: 2004-02-13
; NUMBER OF SEQ ID NOS: 119966
; SEQ ID NO 118267
; LENGTH: 141
; TYPE: prt
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: peptide
; LOCATION: (1)..(141)
; OTHER INFORMATION: Ceres Seq. ID no. 13621190
US-11-056-355B-118267

Query Match 36.8%; Score 42; DB 7; Length 141;
Best Local Similarity 42.1%; Pred. No. 18;
Matches 8; Conservative 3; Mismatches 8; Indels 0; Gaps 0;

Qy 2 HHHASRVARMASDEFFPSMC 20
||:| |: | ||:
Db 117 HHNGSPVSLAPSPVIP SVC 135

RESULT 10

US-10-953-349-2640
; Sequence 2640, Application US/10953349
; Publication No. US20060107345A1
; GENERAL INFORMATION:
; APPLICANT: ALEXANDROV, Nickolai et al.
; TITLE OF INVENTION: SEQUENCE-DETERMINED DNA FRAGMENTS AND CORRESPONDING POLYPEPTIDES
; TITLE OF INVENTION: ENCODED THEREBY
; FILE REFERENCE: 2750-1579PUS2
; CURRENT APPLICATION NUMBER: US/10/953,349
; CURRENT FILING DATE: 2004-09-30
; NUMBER OF SEQ ID NOS: 40252
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 2640
; LENGTH: 142
; TYPE: PRT
; ORGANISM: Arabidopsis thaliana
US-10-953-349-2640

Query Match 36.8%; Score 42; DB 6; Length 142;
Best Local Similarity 42.1%; Pred. No. 18;
Matches 8; Conservative 3; Mismatches 8; Indels 0; Gaps 0;

Qy 2 HHHASRVARMASDEFFPSMC 20
||:| |: | ||:
Db 118 HHNGSPVSLAPSPVIP SVC 136

RESULT 11

US-11-056-355B-39187
; Sequence 39187, Application US/11056355B

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; Publication No. US20060150283A1
; GENERAL INFORMATION:
; APPLICANT: Brover, Vyacheslav
; APPLICANT: Alexandrov, Nickolai
; TITLE OF INVENTION: Sequence Determined DNA Fragments and Corresponding
; TITLE OF INVENTION: Polypeptides Encoded Thereby
; FILE REFERENCE: 2750-1590PUS2
; CURRENT APPLICATION NUMBER: US/11/056,355B
; CURRENT FILING DATE: 2005-02-14
; PRIOR APPLICATION NUMBER: 60/544,190
; PRIOR FILING DATE: 2004-02-13
; NUMBER OF SEQ ID NOS: 119966
; SEQ ID NO 39187
; LENGTH: 142
; TYPE: prt
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: peptide
; LOCATION: (1)..(142)
; OTHER INFORMATION: Ceres Seq. ID no. 13489531
US-11-056-355B-39187

```

```

Query Match          36.8%; Score 42; DB 7; Length 142;
Best Local Similarity 42.1%; Pred. No. 18;
Matches      8; Conservative 3; Mismatches      8; Indels      0; Gaps      0;

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```

Qy      2 HHHASRVARMASDEFPSMC 20
      ||: ||: | ||:|
Db      118 HHNGSPVSLAPSPVIPVC 136

```

RESULT 12

```

US-11-056-355B-48973
; Sequence 48973, Application US/11056355B
; Publication No. US20060150283A1
; GENERAL INFORMATION:
; APPLICANT: Brover, Vyacheslav
; APPLICANT: Alexandrov, Nickolai
; TITLE OF INVENTION: Sequence Determined DNA Fragments and Corresponding
; TITLE OF INVENTION: Polypeptides Encoded Thereby
; FILE REFERENCE: 2750-1590PUS2
; CURRENT APPLICATION NUMBER: US/11/056,355B
; CURRENT FILING DATE: 2005-02-14
; PRIOR APPLICATION NUMBER: 60/544,190
; PRIOR FILING DATE: 2004-02-13
; NUMBER OF SEQ ID NOS: 119966
; SEQ ID NO 48973
; LENGTH: 142
; TYPE: prt
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: peptide
; LOCATION: (1)..(142)
; OTHER INFORMATION: Ceres Seq. ID no. 13489531
US-11-056-355B-48973

```

```

Query Match          36.8%; Score 42; DB 7; Length 142;
Best Local Similarity 42.1%; Pred. No. 18;
Matches      8; Conservative 3; Mismatches      8; Indels      0; Gaps      0;

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```

Qy      2 HHHASRVARMASDEFPSMC 20
      ||: ||: | ||:|
Db      118 HHNGSPVSLAPSPVIPVC 136

```

RESULT 13

```

US-11-056-355B-101571
; Sequence 101571, Application US/11056355B
; Publication No. US20060150283A1
; GENERAL INFORMATION:
; APPLICANT: Brover, Vyacheslav
; APPLICANT: Alexandrov, Nickolai
; TITLE OF INVENTION: Sequence Determined DNA Fragments and Corresponding
; TITLE OF INVENTION: Polypeptides Encoded Thereby
; FILE REFERENCE: 2750-1590PUS2
; CURRENT APPLICATION NUMBER: US/11/056,355B

```

;;
CURRENT FILING DATE: 2005-02-14
PRIOR APPLICATION NUMBER: 60/544,190
PRIOR FILING DATE: 2004-02-13
NUMBER OF SEQ ID NOS: 119966
SEQ ID NO 101571
LENGTH: 142
TYPE: prt
ORGANISM: Arabidopsis thaliana
FEATURE:
NAME/KEY: peptide
LOCATION: (1)..(142)
OTHER INFORMATION: Ceres Seq. ID no. 13608191
US-11-056-355B-101571

Query Match 36.8%; Score 42; DB 7; Length 142;
Best Local Similarity 42.1%; Pred. No. 18;
Matches 8; Conservative 3; Mismatches 8; Indels 0; Gaps 0;

Qy 2 HHHASRVARMASDEFPSMC 20
||: ||: | ||:
Db 118 HHNGSPVSLAPSPVIP SVC 136

RESULT 14

US-11-056-355B-112810
Sequence 112810, Application US/11056355B
Publication No. US20060150283A1
GENERAL INFORMATION:
APPLICANT: Brover, Vyacheslav
APPLICANT: Alexandrov, Nickolai
TITLE OF INVENTION: Sequence Determined DNA Fragments and Corresponding
TITLE OF INVENTION: Polypeptides Encoded Thereby
FILE REFERENCE: 2750-1590PUS2
CURRENT APPLICATION NUMBER: US/11/056,355B
CURRENT FILING DATE: 2005-02-14
PRIOR APPLICATION NUMBER: 60/544,190
PRIOR FILING DATE: 2004-02-13
NUMBER OF SEQ ID NOS: 119966
SEQ ID NO 112810
LENGTH: 142
TYPE: prt
ORGANISM: Arabidopsis thaliana
FEATURE:
NAME/KEY: peptide
LOCATION: (1)..(142)
OTHER INFORMATION: Ceres Seq. ID no. 13608191
US-11-056-355B-112810

Query Match 36.8%; Score 42; DB 7; Length 142;
Best Local Similarity 42.1%; Pred. No. 18;
Matches 8; Conservative 3; Mismatches 8; Indels 0; Gaps 0;

Qy 2 HHHASRVARMASDEFPSMC 20
||: ||: | ||:
Db 118 HHNGSPVSLAPSPVIP SVC 136

RESULT 15

US-11-056-355B-107027
Sequence 107027, Application US/11056355B
Publication No. US20060150283A1
GENERAL INFORMATION:
APPLICANT: Brover, Vyacheslav
APPLICANT: Alexandrov, Nickolai
TITLE OF INVENTION: Sequence Determined DNA Fragments and Corresponding
TITLE OF INVENTION: Polypeptides Encoded Thereby
FILE REFERENCE: 2750-1590PUS2
CURRENT APPLICATION NUMBER: US/11/056,355B
CURRENT FILING DATE: 2005-02-14
PRIOR APPLICATION NUMBER: 60/544,190
PRIOR FILING DATE: 2004-02-13
NUMBER OF SEQ ID NOS: 119966
SEQ ID NO 107027
LENGTH: 244
TYPE: prt
ORGANISM: Arabidopsis thaliana

; FEATURE:
; NAME/KEY: peptide
; LOCATION: (1)..(244)
; OTHER INFORMATION: Ceres Seq. ID no. 13621189
US-11-056-355B-107027

Query Match 36.8%; Score 42; DB 7; Length 244;
Best Local Similarity 42.1%; Pred. No. 32;
Matches 8; Conservative 3; Mismatches 8; Indels 0; Gaps 0;

Qy 2 HHHASRVARMASDEFPSMC 20
||: | |: | ||:
Db 220 HHNGSPVSLAPSPVIPSVC 238

Search completed: July 20, 2006, 09:41:18
Job time : 1.18081 secs

SCORE 1.3 BuildDate: 12/06/2005

This page gives you Search Results detail for the Application 10717243 and Search Result us-10-71 start

GenCore version 5.1.9
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OM protein - protein search, using sw model

Run on: July 20, 2006, 09:36:32 ; Search time 1.51292 Seconds
(without alignments)
1271.939 Million cell updates/sec

Title: US-10-717-243-56
Perfect score: 114
Sequence: 1 CHHHASRVARMASDEFPSMC 20

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR_80:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Match	Query Length	DB ID	Description
1	114	100.0	315	1 A28626	Shigella toxin cha
2	114	100.0	315	1 XUBPH9	Shiga-like toxin c
3	114	100.0	315	2 JN0725	Shiga-like toxin I
4	114	100.0	315	2 F91000	Shiga toxin I subu
5	114	100.0	315	2 H85845	Shiga toxin I subu
6	114	100.0	315	2 A53887	Shiga-like toxin I
7	50.5	44.3	365	2 T08577	hypothetical prote
8	50	43.9	451	2 T33763	hypothetical prote
9	49	43.0	2152	2 T45583	hypothetical prote
10	47	41.2	135	2 A34653	cell adhesion prot
11	47	41.2	252	2 D95853	conserved hypothet
12	46	40.4	196	2 D83279	probable transcrip
13	46	40.4	319	2 I60446	Shiga-like cytotox
14	46	40.4	507	2 JC7855	pyridoxine 4-oxida
15	45	39.5	254	2 S72759	hypothetical prote
16	45	39.5	278	2 G70871	hypothetical prote
17	45	39.5	466	2 PC4296	nicotinic acetylch
18	44	38.6	252	2 T35998	probable DNA-bindi
19	44	38.6	308	2 AH3425	D-ribose-binding p
20	44	38.6	318	2 S01032	Shiga-like toxin I

21	44	38.6	319	2	I76713	variant shiga-like
22	44	38.6	319	2	A32360	shiga-like toxin I
23	44	38.6	319	2	S58343	Shiga-like toxin I
24	44	38.6	319	2	S21940	hypothetical prote
25	44	38.6	319	2	E90779	Shiga toxin 2 subu
26	44	38.6	319	2	G85640	Shiga toxin 2 subu
27	44	38.6	319	2	I54695	shiga-like toxin I
28	44	38.6	319	2	A53890	verocytotoxin A ch
29	44	38.6	320	2	S42608	shiga-like toxin -
30	44	38.6	433	2	T04594	aldehyde dehydroge
31	44	38.6	475	2	S45116	natriuretic peptid
32	44	38.6	535	2	A54155	natriuretic peptid
33	43	37.7	536	2	S71332	natriuretic peptid
34	43	37.7	540	1	OYHUCR	natriuretic peptid
35	43	37.7	1149	2	T20891	hypothetical prote
36	43	37.7	2437	2	S53611	MIBP1 protein - ra
37	43	37.7	2500	1	WMHUE2	HIV-EP2 enhancer-b
38	42	36.8	161	2	S76282	hypothetical prote
39	42	36.8	285	2	B82842	spermidine synthas
40	42	36.8	381	2	S58663	isocitrate dehydro
41	42	36.8	387	2	T13147	isocitrate dehydro
42	42	36.8	398	2	AD2944	fosmidomycin resis
43	42	36.8	398	2	F98338	fosmidomycin resis
44	42	36.8	404	2	AB0376	probable membrane
45	42	36.8	406	1	JC5041	fosmidomycin resis

ALIGNMENTS

RESULT 1

A28626

Shigella toxin chain A precursor - Shigella dysenteriae

N;Alternate names: shiga toxin chain A

N;Contains: rRNA N-glycosidase (EC 3.2.2.22)

C;Species: Shigella dysenteriae

C;Date: 05-Feb-1999 #sequence_revision 05-Feb-1999 #text_change 09-Jul-2004

C;Accession: A28626; S04021

R;Strockbine, N.A.; Jackson, M.P.; Sung, L.M.; Holmes, R.K.; O'Brien, A.D.

J. Bacteriol. 170, 1116-1122, 1988

A;Title: Cloning and sequencing of the genes for Shiga toxin from Shigella dysenteriae type 1.

A;Reference number: A91864; MUID:88139166; PMID:2830229

A;Contents: Type 1 3818T

A;Accession: A28626

A;Molecule type: DNA

A;Residues: 1-315

A;Cross-references: UNIPROT:Q8X696; UNIPARC:UPI0000000DA9; GB:M19437; NID:g152784; PIDN:AAA98347.1; PID:g15

R;Kozlov, Y.V.; Kabishev, A.A.; Fedchenko, V.I.; Baev, A.A.

Dokl. Biochem. 295, 216-220, 1987

A;Title: Cloning and primary structure of Shigella toxin genes.

A;Reference number: S04021

A;Accession: S04021

A;Molecule type: DNA

A;Residues: 1-315

A;Cross-references: UNIPARC:UPI0000000DA9; EMBL:X07903; NID:g46946

C;Genetics:

A;Gene: stxA

C;Complex: heterohexamer of one A chain and five B chains (see PIR:XVEBBD)

C;Function:

A;Description: hydrolyzes the N-glycosidic bond of a specific adenine in 28S rRNA

C;Superfamily: Shigella toxin chain A

C;Keywords: cytotoxin; glycosidase; hexamer; hydrolase; RNA binding

F;1-22/Domain: signal sequence #status predicted

F;23-315/Product: Shigella toxin chain A #status predicted

Query Match 100.0%; Score 114; DB 1; Length 315;
 Best Local Similarity 100.0%; Pred. No. 8e-11;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
 |||||
 Db 264 CHHHASRVARMASDEFPSMC 283

RESULT 2

XUBPH9

Shiga-like toxin chain A precursor - phage H19B
 C;Species: phage H19B
 A;Note: host Escherichia coli
 C;Date: 30-Sep-1990 #sequence_revision 30-Sep-1990 #text_change 09-Jul-2004
 C;Accession: A27052
 R;Calderwood, S.B.; Auclair, F.; Donohue-Rolfe, A.; Keusch, G.T.; Mekalanos, J.J.
 Proc. Natl. Acad. Sci. U.S.A. 84, 4364-4368, 1987
 A;Title: Nucleotide sequence of the Shiga-like toxin genes of Escherichia coli.
 A;Reference number: A27052; MUID:87260808; PMID:3299365
 A;Accession: A27052
 A;Molecule type: DNA
 A;Residues: 1-315
 A;Cross-references: UNIPROT:P08026; UNIPARC:UPI000000043F; GB:M16625; NID:g215043; PIDN:AAA98099.1; PID:g21
 C;Genetics:
 A;Gene: stxA
 C;Superfamily: Shigella toxin chain A
 C;Keywords: toxin
 F;1-22/Domain: signal sequence #status predicted
 F;23-315/Product: Shiga-like toxin chain A #status predicted

Query Match 100.0%; Score 114; DB 1; Length 315;
 Best Local Similarity 100.0%; Pred. No. 8e-11;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
 |||||
 Db 264 CHHHASRVARMASDEFPSMC 283

RESULT 3

JN0725
 Shiga-like toxin I chain A precursor [validated] - Escherichia coli
 C;Species: Escherichia coli
 C;Date: 14-Jul-1994 #sequence_revision 14-Jul-1994 #text_change 09-Jul-2004
 C;Accession: JN0725; I53932; I68041; I68043; C61473; A61473; S47254; S47256; S47258
 R;Paton, A.W.; Paton, J.C.; Goldwater, P.N.; Heuzenroeder, M.W.; Manning, P.A.
 Gene 129, 87-92, 1993
 A;Title: Sequence of a variant Shiga-like toxin type-I operon of Escherichia coli O111:H-.
 A;Reference number: JN0725; MUID:93328129; PMID:8335264
 A;Accession: JN0725
 A;Molecule type: DNA
 A;Residues: 1-315
 A;Cross-references: UNIPROT:Q47647; UNIPARC:UPI00000BC490; GB:L04539; NID:g147832; PIDN:AAA71893.1; PID:g14
 A;Experimental source: serotype O111:H(-)
 R;Paton, A.W.; Beutin, L.; Paton, J.C.
 Gene 153, 71-74, 1995
 A;Title: Heterogeneity of the amino-acid sequences of Escherichia coli Shiga-like toxin type-I operons.
 A;Reference number: I53932; MUID:95189106; PMID:7883188
 A;Accession: I53932
 A;Status: preliminary; translated from GB/EMBL/DDBJ
 A;Molecule type: DNA
 A;Residues: 1-170,'S',172-248,'E',250-315
 A;Cross-references: UNIPARC:UPI00000BA3CB; EMBL:Z36899; NID:g534987; PIDN:CAA85366.1; PID:g534988
 A;Experimental source: serotype O48:H21
 A;Note: submitted to the EMBL Data Library, August 1994
 A;Accession: I68041
 A;Status: preliminary; translated from GB/EMBL/DDBJ
 A;Molecule type: DNA
 A;Residues: 1-131,'S',133-170,'S',172-315
 A;Cross-references: UNIPARC:UPI00000B9ECB; EMBL:Z36900; NID:g535054; PIDN:CAA85368.1; PID:g535055
 A;Experimental source: serotype O111:H(-)
 A;Note: submitted to the EMBL Data Library, August 1994
 A;Accession: I68043
 A;Status: preliminary; translated from GB/EMBL/DDBJ
 A;Molecule type: DNA
 A;Residues: 1-170,'S',172-250,'V',252-273,'IVPN',278-284,'V',286-308,'I',310-311,'A',313-315
 A;Cross-references: UNIPARC:UPI0000055D32; EMBL:Z36901; NID:g535088; PIDN:CAA85370.1; PID:g535089
 A;Experimental source: serotype OX3:H8
 R;Takao, T.; Tanabe, T.; Hong, Y.M.; Shimonishi, Y.; Kurazono, H.; Yutsudo, T.; Sasakawa, C.; Yoshikawa, M.
 Microb. Pathog. 5, 357-369, 1988
 A;Title: Identity of molecular structure of Shiga-like toxin I (VT1) from Escherichia coli O157:H7 with tha
 A;Reference number: A61473
 A;Accession: C61473
 A;Status: preliminary
 A;Molecule type: DNA
 A;Residues: 1-170,'S',172-315

A;Cross-references: UNIPARC:UPI0000000DA9
 A;Experimental source: strain O157:H7
 A;Accession: A61473
 A;Status: preliminary
 A;Molecule type: protein
 A;Residues: 23-51;62-76;107-132,'XX',135-136;183-192;202-224,'XX',227-241;276-282,291-294,'X',296-299,'X',3
 A;Cross-references: UNIPARC:UPI00001766F7; UNIPARC:UPI00001766F8; UNIPARC:UPI00001766F9; UNIPARC:UPI0000176
 A;Experimental source: strain O157:H7
 C;Genetics:
 A;Gene: SLT-1A
 C;Superfamily: Shigella toxin chain A
 C;Keywords: disulfide bond; toxin
 F;1-22/Domain: signal sequence #status predicted
 F;23-315/Product: Shiga-like toxin I chain A #status experimental

Query Match 100.0%; Score 114; DB 2; Length 315;
 Best Local Similarity 100.0%; Pred. No. 8e-11;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
 |||||
 Db 264 CHHHASRVARMASDEFPSMC 283

RESULT 4

F91000
 Shiga toxin I subunit A precursor [imported] - Escherichia coli (strain O157:H7, substrain RIMD 0509952)
 C;Species: Escherichia coli
 C;Date: 18-Jul-2001 #sequence_revision 18-Jul-2001 #text_change 09-Jul-2004
 C;Accession: F91000
 R;Hayashi, T.; Makino, K.; Ohnishi, M.; Kurokawa, K.; Ishii, K.; Yokoyama, K.; Han, C.G.; Ohtsubo, E.; Naka
 DNA Res. 8, 11-22, 2001
 A;Title: Complete genome sequence of enterohemorrhagic Escherichia coli O157:H7 and genomic comparison with
 A;Reference number: A99629; MUID:21156231; PMID:11258796
 A;Accession: F91000
 A;Status: preliminary
 A;Molecule type: DNA
 A;Residues: 1-315
 A;Cross-references: UNIPROT:Q8X696; UNIPARC:UPI0000000DA9; GB:BA000007; PIDN:BAB36397.1; PID:g13362443; GSP
 A;Experimental source: strain O157:H7, substrain RIMD 0509952
 C;Genetics:
 A;Gene: ECs2974
 C;Superfamily: Shigella toxin chain A

Query Match 100.0%; Score 114; DB 2; Length 315;
 Best Local Similarity 100.0%; Pred. No. 8e-11;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
 |||||
 Db 264 CHHHASRVARMASDEFPSMC 283

RESULT 5

H85845
 Shiga toxin I subunit A precursor [imported] - Escherichia coli (strain O157:H7, substrain EDL933)
 C;Species: Escherichia coli
 C;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 09-Jul-2004
 C;Accession: H85845
 R;Perna, N.T.; Plunkett III, G.; Burland, V.; Mau, B.; Glasner, J.D.; Rose, D.J.; Mayhew, G.F.; Evans, P.S.
 Nature 409, 529-533, 2001
 A;Title: Genome sequence of enterohemorrhagic Escherichia coli O157:H7.
 A;Reference number: A85480; MUID:21074935; PMID:11206551
 A;Accession: H85845
 A;Status: preliminary
 A;Molecule type: DNA
 A;Residues: 1-315
 A;Cross-references: UNIPROT:Q8X696; UNIPARC:UPI0000000DA9; GB:AE005174; NID:g12516395; PIDN:AAG57228.1; GSP
 A;Experimental source: strain O157:H7, substrain EDL933
 C;Genetics:
 A;Gene: stx1A
 C;Superfamily: Shigella toxin chain A

Query Match 100.0%; Score 114; DB 2; Length 315;
 Best Local Similarity 100.0%; Pred. No. 8e-11;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
|||||
Db 264 CHHHASRVARMASDEFPSMC 283

RESULT 6

A53887
Shiga-like toxin I A chain precursor - phage 933J
C;Species: phage 933J
C;Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_change 09-Jul-2004
C;Accession: A53887
R;Jackson, M.P.; Newland, J.W.; Holmes, R.K.; O'Brien, A.D.
Microb. Pathog. 2, 147-153, 1987
A;Title: Nucleotide sequence analysis of the structural genes for Shiga-like toxin I encoded by bacteriophage
A;Reference number: A53887; MUID:89180929; PMID:3333796
A;Accession: A53887
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-315
A;Cross-references: UNIPROT:P08026; UNIPARC:UPI00000043F; GB:M19473; NID:g215072; PIDN:AAA98151.1; PID:g21
C;Superfamily: Shigella toxin chain A

Query Match 100.0%; Score 114; DB 2; Length 315;
Best Local Similarity 100.0%; Pred. No. 8e-11;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
|||||
Db 264 CHHHASRVARMASDEFPSMC 283

RESULT 7

T08577
hypothetical protein T22F8.190 - Arabidopsis thaliana
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 11-Jun-1999 #sequence_revision 11-Jun-1999 #text_change 09-Jul-2004
C;Accession: T08577
R;Bevan, M.; Zimmermann, W.; Grueneisen, A.; Wambutt, R.; Bancroft, I.; Mewes, H.W.; Mayer, K.F.X.; Schuell
submitted to the Protein Sequence Database, May 1999
A;Reference number: Z16442
A;Accession: T08577
A;Molecule type: DNA
A;Residues: 1-365
A;Cross-references: UNIPROT:Q9T035; UNIPARC:UPI00000A6AFC; EMBL:AL050351; GSPDB:GN00062; ATSP:T22F8.190
A;Experimental source: cultivar Columbia; BAC clone T22F8
C;Genetics:
A;Gene: ATSP:T22F8.190
A;Map position: 4
C;Superfamily: conserved hypothetical protein containing F-box and Kelch domains

Query Match 44.3%; Score 50.5; DB 2; Length 365;
Best Local Similarity 47.8%; Pred. No. 1.9;
Matches 11; Conservative 2; Mismatches 7; Indels 3; Gaps 1;

Qy 1 CHHHASRVA---RMADEFPSMC 20
| | | | | : | | : | | |
Db 140 CRSHTWREAPSMRVARDDFPSTC 162

RESULT 8

T33763
hypothetical protein Y55H10A.1 - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text_change 09-Jul-2004
C;Accession: T33763
R;Antoniou, B.; Smith, A.; Gibson, A.
submitted to the EMBL Data Library, October 1998
A;Description: The sequence of C. elegans cosmid Y55H10A.
A;Reference number: Z21402
A;Accession: T33763
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-451
A;Cross-references: UNIPROT:Q9TYW1; UNIPARC:UPI000007570D; EMBL:AF100675; PIDN:AAC69004.1; GSPDB:GN00022; C
A;Experimental source: strain Bristol N2; clone Y55H10A

C;Genetics:
A;Gene: CESP:Y55H10A.1
A;Map position: 4
A;Introns: 29/2; 57/1; 95/3; 233/1; 319/3
C;Superfamily: Caenorhabditis elegans hypothetical protein Y55H10A.1

Query Match 43.9%; Score 50; DB 2; Length 451;
Best Local Similarity 58.8%; Pred. No. 2.8;
Matches 10; Conservative 3; Mismatches 4; Indels 0; Gaps 0;

Qy 2 HHHASRVARMASDEFPS 18
| :||| |:|:|||| |
Db 151 HEKSSRVKRVATDEFNS 167

RESULT 9

T45583

hypothetical protein F11C1.210 - Arabidopsis thaliana

C;Species: Arabidopsis thaliana (mouse-ear cress)

C;Date: 04-Feb-2000 #sequence_revision 04-Feb-2000 #text_change 09-Jul-2004

C;Accession: T45583

R;Bargues, M.; Collado, M.C.; Navarro, P.; Terol, J.; Perez-Alonso, M.; Mewes, H.W.; Mayer, K.F.X.; Lemcke, submitted to the Protein Sequence Database, December 1999

A;Reference number: Z23007

A;Accession: T45583

A;Status: preliminary

A;Molecule type: DNA

A;Residues: 1-2152

A;Cross-references: UNIPROT:Q9SND1; UNIPARC:UPI000009D156; EMBL:AL132976

A;Experimental source: cultivar Columbia; BAC clone F11C1

C;Genetics:

A;Map position: 3

A;Introns: 53/3; 411/2; 1479/3; 1543/2; 1592/3; 1659/1; 1750/1; 1965/3

A;Note: F11C1.210

Query Match 43.0%; Score 49; DB 2; Length 2152;
Best Local Similarity 41.2%; Pred. No. 20;
Matches 7; Conservative 5; Mismatches 5; Indels 0; Gaps 0;

Qy 3 HHASRVARMASDEFPSM 19
|| :|| : :|||:
Db 131 HHVEKVATLRGEDEFPSL 147

RESULT 10

A34653

cell adhesion protein SQM1 - human

C;Species: Homo sapiens (man)

C;Date: 06-Jul-1990 #sequence_revision 06-Jul-1990 #text_change 09-Jul-2004

C;Accession: A34653

R;Wong, Y.C.; Tsao, S.W.; Kakefuda, M.; Bernal, S.D.

Biochem. Biophys. Res. Commun. 166, 984-992, 1990

A;Title: cDNA cloning of a novel cell adhesion protein expressed in human squamous carcinoma cells.

A;Reference number: A34653; MUID:90147818; PMID:2302251

A;Accession: A34653

A;Status: preliminary

A;Molecule type: mRNA

A;Residues: 1-135

A;Cross-references: UNIPROT:P17568; UNIPARC:UPI000014AAD6; GB:M33374; NID:g180232; PIDN:AAA35675.1; PID:g18

C;Keywords: cell adhesion

Query Match 41.2%; Score 47; DB 2; Length 135;
Best Local Similarity 44.4%; Pred. No. 2.5;
Matches 8; Conservative 2; Mismatches 8; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPS 18
| || |: : | |||
Db 58 CAHHLIRLLKCKRDSFPS 75

RESULT 11

D95853

conserved hypothetical protein [imported] - Sinorhizobium meliloti (strain 1021) magaplasmid pSymB

C;Species: Sinorhizobium meliloti

C;Date: 24-Aug-2001 #sequence_revision 24-Aug-2001 #text_change 09-Jul-2004

C;Accession: D95853

R;Finan, T.M.; Weidner, S.; Wong, K.; Buhrmester, J.; Chain, P.; Vorholter, F.J.; Hernandez-Lucas, I.; Beck
 Proc. Natl. Acad. Sci. U.S.A. 98, 9889-9894, 2001
 A;Title: The complete sequence of the 1,683-kb pSymB megaplasmid from the N2-fixing endosymbiont Sinorhizob
 A;Reference number: A95842; MUID:21396508; PMID:11481431
 A;Accession: D95853
 A;Status: preliminary
 A;Molecule type: DNA
 A;Residues: 1-252
 A;Cross-references: UNIPROT:Q92X70; UNIPARC:UPI00000CB3EA; GB:AL591985; PIDN:CAC48492.1; PID:gi5139964; GSP
 A;Experimental source: strain 1021, megaplasmid pSymB
 R;Galibert, F.; Finan, T.M.; Long, S.R.; Puhler, A.; Abola, P.; Ampe, F.; Barloy-Hubler, F.; Barnett, M.J.;
 Science 293, 668-672, 2001
 A;Authors: Kahn, D.; Kahn, M.L.; Kalman, S.; Keating, D.H.; Kiss, E.; Komp, C.; Lelaure, V.; Masuy, D.; Pal
 A;Title: The composite genome of the legume symbiont Sinorhizobium meliloti.
 A;Reference number: A96039; MUID:21368234; PMID:11474104
 A;Contents: annotation
 C;Genetics:
 A;Gene: SMb20092
 A;Genome: plasmid

Query Match 41.2%; Score 47; DB 2; Length 252;
 Best Local Similarity 52.9%; Pred. No. 4.7;
 Matches 9; Conservative 1; Mismatches 7; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFP 17
 | | | :|| || |
 Db 224 CRVHGSTLARSASDHLP 240

RESULT 12 D83279

probable transcription regulator PA2931 [imported] - Pseudomonas aeruginosa (strain PA01)
 C;Species: Pseudomonas aeruginosa
 C;Date: 15-Sep-2000 #sequence_revision 15-Sep-2000 #text_change 09-Jul-2004
 C;Accession: D83279
 R;Stover, C.K.; Pham, X.Q.; Erwin, A.L.; Mizoguchi, S.D.; Warrenner, P.; Hickey, M.J.; Brinkman, F.S.L.; Huf
 Nature 406, 959-964, 2000
 A;Title: Complete genome sequence of Pseudomonas aeruginosa PA01, an opportunistic pathogen.
 A;Reference number: A82950; MUID:20437337; PMID:10984043
 A;Accession: D83279
 A;Status: preliminary
 A;Molecule type: DNA
 A;Residues: 1-196
 A;Cross-references: UNIPROT:Q9HZR6; UNIPARC:UPI00000C588E; GB:AE004719; GB:AE004091; NID:g9949021; PIDN:AAG
 A;Experimental source: strain PA01
 C;Genetics:
 A;Gene: PA2931

Query Match 40.4%; Score 46; DB 2; Length 196;
 Best Local Similarity 69.2%; Pred. No. 5.3;
 Matches 9; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 8 VARMASDEFPSMC 20
 ||| |||| |
 Db 95 VARFCSDEFPRGC 107

RESULT 13 I60446

Shiga-like cytotoxin subunit A - Escherichia coli
 N;Alternate names: shiga-like toxin II variant chain A
 C;Species: Escherichia coli
 C;Date: 07-Jun-1996 #sequence_revision 07-Jun-1996 #text_change 09-Jul-2004
 C;Accession: I60446; I57048; S31420
 R;Paton, A.W.; Paton, J.C.; Heuzenroeder, M.W.; Goldwater, P.N.; Manning, P.A.
 Microb. Pathog. 13, 225-236, 1992
 A;Title: Cloning and nucleotide sequence of a variant Shiga-like toxin II gene from Escherichia coli OX3:H2
 A;Reference number: I60446; MUID:93180660; PMID:1291844
 A;Accession: I60446
 A;Status: translated from GB/EMBL/DDBJ
 A;Molecule type: DNA
 A;Residues: 1-319
 A;Cross-references: UNIPROT:Q03037; UNIPARC:UPI00000BEE9B; EMBL:X65949; NID:g49089; PIDN:CAA46767.1; PID:g4
 R;Paton, A.W.; Paton, J.C.; Manning, P.A.
 Microb. Pathog. 15, 77-82, 1993
 A;Title: Polymerase chain reaction amplification, cloning and sequencing of variant Escherichia coli Shiga-

A;Reference number: I57048; MUID:94018566; PMID:8412629
 A;Accession: I57048
 A;Status: translated from GB/EMBL/DDBJ
 A;Molecule type: DNA
 A;Residues: 1-197,'G',199-319
 A;Cross-references: UNIPARC:UPI000016F4EF; GB:L11078; NID:g304950; PIDN:AAA16360.1; PID:g304951
 C;Superfamily: Shigella toxin chain A
 C;Keywords: cytotoxin

Query Match 40.4%; Score 46; DB 2; Length 319;
 Best Local Similarity 35.0%; Pred. No. 8.7;
 Matches 7; Conservative 3; Mismatches 10; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
 ||| :| | :| |
 Db 263 CHHQGARSVRVAVNEEQPEC 282

RESULT 14

JC7855
 pyridoxine 4-oxidase (EC 1.1.3.12) - Microbacterium luteolum YK-1
 N;Alternate names: PN 4-oxidase; pyridoxin 4-oxidase
 C;Species: Microbacterium luteolum YK-1
 C;Date: 18-Nov-2002 #sequence_revision 18-Nov-2002 #text_change 05-Oct-2004
 C;Accession: JC7855; PC7192
 R;Kaneda, Y.; Ohnishi, K.; Yagi, T.
 Biosci. Biotechnol. Biochem. 66, 1022-1031, 2002
 A;Title: Purification, Molecular cloning, and characterization of pyridoxine 4-oxidase from Microbacterium
 A;Reference number: JC7855; MUID:22087109; PMID:12092811
 A;Accession: JC7855
 A;Molecule type: DNA
 A;Residues: 1-507
 A;Cross-references: UNIPARC:UPI000017CE48; DDBJ:AB049341
 A;Experimental source: strain YK-1
 A;Accession: PC7192
 A;Molecule type: protein
 A;Residues: 2-20;348-364
 A;Cross-references: UNIPARC:UPI000017CE49; UNIPARC:UPI000017CE4A
 C;Comment: This enzyme that is an FAD-dependent enzyme and a monomeric protein belongs to the glucose-metha
 C;Genetics:
 A;Gene: pno
 C;Superfamily: alcohol oxidase
 C;Keywords: oxidoreductase

Query Match 40.4%; Score 46; DB 2; Length 507;
 Best Local Similarity 57.1%; Pred. No. 14;
 Matches 8; Conservative 0; Mismatches 6; Indels 0; Gaps 0;

Qy 2 HHHSASRVARMASDE 15
 ||| | || ||
 Db 446 HHHPGSGTCRMGKDE 459

RESULT 15

S72759
 hypothetical protein B1496_C2_188 - Mycobacterium leprae
 C;Species: Mycobacterium leprae
 C;Date: 19-Mar-1997 #sequence_revision 25-Apr-1997 #text_change 09-Jul-2004
 C;Accession: S72759; T11014
 R;Smith, D.R.; Robison, K.
 submitted to the EMBL Data Library, November 1993
 A;Description: Mycobacterium leprae cosmid B1496.
 A;Reference number: S72695
 A;Accession: S72759
 A;Molecule type: DNA
 A;Residues: 1-254
 A;Cross-references: UNIPROT:Q49688; UNIPARC:UPI00000D433C; EMBL:U00013; NID:g466868; PIDN:AAA17126.1; PID:g
 R;Parkhill, J.; Barrell, B.G.; Rajandream, M.A.
 submitted to the EMBL Data Library, September 1997
 A;Reference number: Z16918
 A;Accession: T11014
 A;Status: preliminary; translated from GB/EMBL/DDBJ
 A;Molecule type: DNA
 A;Residues: 1-254
 A;Cross-references: UNIPARC:UPI00000D433C; EMBL:Z99125; NID:g2398683; PIDN:CAB16173.1; PID:g2398708
 C;Genetics:

A;Gene: MLCL536.29c
A;Start codon: GTG

Query Match 39.5%; Score 45; DB 2; Length 254;
Best Local Similarity 45.5%; Pred. No. 10;
Matches 10; Conservative 2; Mismatches 4; Indels 6; Gaps 2;

Qy 1 CHHH--ASRVARMASDEFPSMC 20
| | | | | : | | : |
Db 196 CQHHCVPVSHVA----EEFPELC 213

Search completed: July 20, 2006, 09:37:23
Job time : 2.51292 secs



SCORE Search Results Details for Application 10717243 and Search Result us-10-717-243-56.rup.

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OM protein - protein search, using sw_model

Run on: July 20, 2006, 09:36:29 ; Search time 20.5535 Seconds
(without alignments)
900.105 Million cell updates/sec

Title: US-10-717-243-56
Perfect score: 114
Sequence: 1 CHHHASRVARMASDEFPSMC 20

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2849598 seqs, 925015592 residues

Total number of hits satisfying chosen parameters: 2849598

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : UniProt_7.2:*
1: uniprot_sprot:*
2: uniprot_trembl:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB	ID	Description
1	114	100.0	222	2	Q5ZPW9_ECOLI	Q5zpw9 escherichia
2	114	100.0	236	2	Q5ZPX0_ECOLI	Q5zpx0 escherichia
3	114	100.0	237	2	Q5ZPX1_ECOLI	Q5zpx1 escherichia
4	114	100.0	240	2	Q5ZPX2_ECOLI	Q5zpx2 escherichia
5	114	100.0	242	2	Q5ZPX4_ECOLI	Q5zpx4 escherichia
6	114	100.0	243	2	Q5ZPX3_ECOLI	Q5zpx3 escherichia
7	114	100.0	243	2	Q5ZPX5_ECOLI	Q5zpx5 escherichia
8	114	100.0	248	2	Q5ZPX6_ECOLI	Q5zpx6 escherichia
9	114	100.0	254	2	Q5ZPX8_ECOLI	Q5zpx8 escherichia
10	114	100.0	259	2	Q5ZPX9_ECOLI	Q5zpx9 escherichia
11	114	100.0	276	2	Q5ZPY0_ECOLI	Q5zpy0 escherichia
12	114	100.0	313	2	Q7WZ18_ECO57	Q7wzi8 escherichia
13	114	100.0	315	1	SLTA_BPH19	P08026 bacterioph
14	114	100.0	315	1	SLTA_BPH30	P10149 bacterioph
15	114	100.0	315	2	Q5MBW7_9CAUD	Q5mbw7 stx1-conver

16	114	100.0	315	2	Q6LDT4_9VIRU	Q6ldt4 coliphage 9
17	114	100.0	315	2	Q776E8_9CAUD	Q776e8 stx1 conver
18	114	100.0	315	2	Q777W4_9VIRU	Q777w4 bacterioph
19	114	100.0	315	2	Q779K4_9CAUD	Q779k4 shigella so
20	114	100.0	315	2	Q77YB9_BPH19	Q77yb9 bacterioph
21	114	100.0	315	2	Q7AYI8_9VIRU	Q7ay18 bacterioph
22	114	100.0	315	2	Q32GM1_SHIDS	Q32gm1 shigella dy
23	114	100.0	315	2	Q47638_ECOLI	Q47638 escherichia
24	114	100.0	315	2	Q47639_ECOLI	Q47639 escherichia
25	114	100.0	315	2	Q47647_ECOLI	Q47647 escherichia
26	114	100.0	315	2	Q7B2T8_SHISO	Q7b2t8 shigella so
27	114	100.0	315	2	Q7BQ99_SHIDY	Q7bq99 shigella dy
28	114	100.0	315	2	Q7WZ17_ECO57	Q7wzi7 escherichia
29	114	100.0	315	2	Q8L170_ECOLI	Q8l170 escherichia
30	114	100.0	315	2	Q8X696_ECOLI	Q8x696 escherichia
31	114	100.0	315	2	Q9FBI2_SHIDY	Q9fbi2 shigella dy
32	114	100.0	315	2	Q7AK38_ECO57	Q7ak38 escherichia
33	114	100.0	315	2	Q6H9W4_9CAUD	Q6h9w4 phage bp-47
34	105	92.1	315	2	Q83XK3_ECOLI	Q83xk3 escherichia
35	96	84.2	315	2	Q94M00_9VIRU	Q94m00 bacterioph
36	96	84.2	315	2	Q47640_ECOLI	Q47640 escherichia
37	96	84.2	315	2	Q8VV67_ECOLI	Q8vv67 escherichia
38	90	78.9	315	2	Q8VV64_ECOLI	Q8vv64 escherichia
39	89	78.1	251	2	Q5ZPX7_ECOLI	Q5zpx7 escherichia
40	86	75.4	315	2	Q8L168_ECOLI	Q8l168 escherichia
41	52	45.6	427	2	Q4UWU4_XANCB	Q4uwu4 xanthomonas
42	52	45.6	427	2	Q8P7A8_XANCP	Q8p7a8 xanthomonas
43	52	45.6	555	2	Q3XRP7_9PROT	Q3xrp7 magnetococc
44	51	44.7	274	2	Q2RSZ4_RHORU	Q2rsz4 rhodospiril
45	50.5	44.3	365	2	Q9T035_ARATH	Q9t035 arabidopsis

ALIGNMENTS

RESULT 1

Q5ZPW9_ECOLI

ID Q5ZPW9_ECOLI PRELIMINARY; PRT; 222 AA.
AC Q5ZPW9;
DT 23-NOV-2004, integrated into UniProtKB/TrEMBL.
DT 23-NOV-2004, sequence version 1.
DT 07-FEB-2006, entry version 8.
DE Verocytotoxin 1 (Fragment).
GN Name=VT1;
OS Escherichia coli.
OC Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC Enterobacteriaceae; Escherichia.
OX NCBI_TaxID=562;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RC STRAIN=372;
RA Catarama T.M.;
RT "Rapid Diagnostic Methods for Food Borne Pathogens."
RL Submitted (JAN-2003) to the EMBL/GenBank/DBJ databases.
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CC -----
DR EMBL; AJ537526; CAD68999.1; -; Genomic_DNA.
DR SMR; Q5ZPW9; 1-222.
DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
DR InterPro; IPR001574; RIP.
DR Pfam; PF00161; RIP; 1.
DR PRINTS; PR00396; SHIGARICIN.
DR PROSITE; PS00275; SHIGA_RICIN; 1.
FT NON_TER 1 1
FT NON_TER 222 222
SQ SEQUENCE 222 AA; 24698 MW; F29BF3CE24419E29 CRC64;

Query Match 100.0%; Score 114; DB 2; Length 222;
Best Local Similarity 100.0%; Pred. No. 5.5e-10;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
|||||

Db 196 CHHHASRVARMASDEFPSMC 215

RESULT 2

Q5ZPX0_ECOLI

ID Q5ZPX0_ECOLI PRELIMINARY; PRT; 236 AA.
AC Q5ZPX0;
DT 23-NOV-2004, integrated into UniProtKB/TrEMBL.
DT 23-NOV-2004, sequence version 1.
DT 07-FEB-2006, entry version 8.
DE Verocytotoxin 1 (Fragment).
GN Name=VT1;
OS Escherichia coli.
OC Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC Enterobacteriaceae; Escherichia.
OX NCBI_TaxID=562;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RC STRAIN=348;
RA Catarame T.M.;
RT "Rapid Diagnostic Methods for Food Borne Pathogens."
RL Submitted (JAN-2003) to the EMBL/GenBank/DDBJ databases.
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CC -----
DR EMBL; AJ537525; CAD68998.1; -; Genomic_DNA.
DR SMR; Q5ZPX0; 1-236.
DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
DR InterPro; IPR001574; RIP.
DR Pfam; PF00161; RIP; 1.
DR PRINTS; PR00396; SHIGARICIN.
DR PROSITE; PS00275; SHIGA_RICIN; 1.
FT NON_TER 1 1
FT NON_TER 236 236
SQ SEQUENCE 236 AA; 26045 MW; F8EEDF81890F04C0 CRC64;

Query Match 100.0%; Score 114; DB 2; Length 236;
Best Local Similarity 100.0%; Pred. No. 5.9e-10;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
|||||
Db 207 CHHHASRVARMASDEFPSMC 226

RESULT 3

Q5ZPX1_ECOLI

ID Q5ZPX1_ECOLI PRELIMINARY; PRT; 237 AA.
AC Q5ZPX1;
DT 23-NOV-2004, integrated into UniProtKB/TrEMBL.
DT 23-NOV-2004, sequence version 1.
DT 07-FEB-2006, entry version 8.
DE Verocytotoxin 1 (Fragment).
GN Name=VT1;
OS Escherichia coli.
OC Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC Enterobacteriaceae; Escherichia.
OX NCBI_TaxID=562;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RC STRAIN=333;
RA Catarame T.M.;
RT "Rapid Diagnostic Methods for Food Borne Pathogens."
RL Submitted (JAN-2003) to the EMBL/GenBank/DDBJ databases.
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CC -----
DR EMBL; AJ537524; CAD68997.1; -; Genomic_DNA.
DR SMR; Q5ZPX1; 1-237.
DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
DR InterPro; IPR001574; RIP.
DR Pfam; PF00161; RIP; 1.

DR PRINTS; PR00396; SHIGARICIN.
DR PROSITE; PS00275; SHIGA_RICIN; 1.
FT NON_TER 1 1
FT NON_TER 237 237
SQ SEQUENCE 237 AA; 26183 MW; D578EEDF81890F04 CRC64;

Query Match 100.0%; Score 114; DB 2; Length 237;
Best Local Similarity 100.0%; Pred. No. 5.9e-10;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
|||||
Db 207 CHHHASRVARMASDEFPSMC 226

RESULT 4

Q5ZPX2_ECOLI
ID Q5ZPX2_ECOLI PRELIMINARY; PRT; 240 AA.
AC Q5ZPX2;
DT 23-NOV-2004, integrated into UniProtKB/TrEMBL.
DT 23-NOV-2004, sequence version 1.
DT 07-FEB-2006, entry version 8.
DE Verocytotoxin 1 (Fragment).
GN Name=VT1;
OS Escherichia coli.
OC Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC Enterobacteriaceae; Escherichia.
OX NCBI_TaxID=562;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RC STRAIN=359;
RA Catarame T.M.;
RT "Rapid Diagnostic Methods for Food Borne Pathogens."
RL Submitted (JAN-2003) to the EMBL/GenBank/DDBJ databases.
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CC -----
DR EMBL; AJ537523; CAD68996.1; -; Genomic_DNA.
DR SMR; Q5ZPX2; 1-240.
DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
DR InterPro; IPR001574; RIP.
DR Pfam; PF00161; RIP; 1.
DR PRINTS; PR00396; SHIGARICIN.
DR PROSITE; PS00275; SHIGA_RICIN; 1.
FT NON_TER 1 1
FT NON_TER 240 240
SQ SEQUENCE 240 AA; 26538 MW; B46AA23578EEDF81 CRC64;

Query Match 100.0%; Score 114; DB 2; Length 240;
Best Local Similarity 100.0%; Pred. No. 6e-10;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
|||||
Db 207 CHHHASRVARMASDEFPSMC 226

RESULT 5

Q5ZPX4_ECOLI
ID Q5ZPX4_ECOLI PRELIMINARY; PRT; 242 AA.
AC Q5ZPX4;
DT 23-NOV-2004, integrated into UniProtKB/TrEMBL.
DT 23-NOV-2004, sequence version 1.
DT 07-FEB-2006, entry version 8.
DE Verocytotoxin 1 (Fragment).
GN Name=VT1;
OS Escherichia coli.
OC Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC Enterobacteriaceae; Escherichia.
OX NCBI_TaxID=562;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RC STRAIN=354;
RA Catarame T.M.;

RT "Rapid Diagnostic Methods for Food Borne Pathogens.";
 RL Submitted (JAN-2003) to the EMBL/GenBank/DDBJ databases.
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 CC -----
 DR EMBL; AJ537521; CAD68994.1; -; Genomic_DNA.
 DR SMR; Q5ZPX4; 1-242.
 DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
 DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
 DR InterPro; IPR001574; RIP.
 DR Pfam; PF00161; RIP; 1.
 DR PRINTS; PR00396; SHIGARICIN.
 DR PROSITE; PS00275; SHIGA_RICIN; 1.
 FT NON_TER 1 1
 FT NON_TER 242 242
 SQ SEQUENCE 242 AA; 26615 MW; A32A72928BB03D43 CRC64;

Query Match 100.0%; Score 114; DB 2; Length 242;
 Best Local Similarity 100.0%; Pred. No. 6.1e-10;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
 |||||
 Db 216 CHHHASRVARMASDEFPSMC 235

RESULT 6

Q5ZPX3_ECOLI
 ID Q5ZPX3_ECOLI PRELIMINARY; PRT; 243 AA.
 AC Q5ZPX3;
 DT 23-NOV-2004, integrated into UniProtKB/TrEMBL.
 DT 23-NOV-2004, sequence version 1.
 DT 07-FEB-2006, entry version 8.
 DE Verocytotoxin 1 (Fragment).
 GN Name=VT1;
 OS Escherichia coli.
 OC Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
 OC Enterobacteriaceae; Escherichia.
 OX NCBI_TaxID=562;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=352;
 RA Catarame T.M.;
 RT "Rapid Diagnostic Methods for Food Borne Pathogens.";
 RL Submitted (JAN-2003) to the EMBL/GenBank/DDBJ databases.
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 DR EMBL; AJ537522; CAD68995.1; -; Genomic_DNA.
 DR SMR; Q5ZPX3; 1-243.
 DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
 DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
 DR InterPro; IPR001574; RIP.
 DR Pfam; PF00161; RIP; 1.
 DR PRINTS; PR00396; SHIGARICIN.
 DR PROSITE; PS00275; SHIGA_RICIN; 1.
 FT NON_TER 1 1
 FT NON_TER 243 243
 SQ SEQUENCE 243 AA; 26765 MW; 1E58F46958FD9469 CRC64;

Query Match 100.0%; Score 114; DB 2; Length 243;
 Best Local Similarity 100.0%; Pred. No. 6.1e-10;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
 |||||
 Db 209 CHHHASRVARMASDEFPSMC 228

RESULT 7

Q5ZPX5_ECOLI
 ID Q5ZPX5_ECOLI PRELIMINARY; PRT; 243 AA.
 AC Q5ZPX5;
 DT 23-NOV-2004, integrated into UniProtKB/TrEMBL.

DT 23-NOV-2004, sequence version 1.
 DT 07-FEB-2006, entry version 8.
 DE Verocytotoxin 1 (Fragment).
 GN Name=VT1;
 OS Escherichia coli.
 OC Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
 OC Enterobacteriaceae; Escherichia.
 OX NCBI_TaxID=562;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=381;
 RA Catarama T.M.;
 RT "Rapid Diagnostic Methods for Food Borne Pathogens."
 RL Submitted (JAN-2003) to the EMBL/GenBank/DDBJ databases.
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 DR EMBL; AJ537520; CAD68993.1; -; Genomic_DNA.
 DR SMR; Q5ZPX5; 1-243.
 DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
 DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
 DR InterPro; IPR001574; RIP.
 DR Pfam; PF00161; RIP; 1.
 DR PRINTS; PR00396; SHIGARICIN.
 DR PROSITE; PS00275; SHIGA_RICIN; 1.
 FT NON_TER 1 1
 FT NON_TER 243 243
 SQ SEQUENCE 243 AA; 26617 MW; 4A69E4A3538DE250 CRC64;

Query Match 100.0%; Score 114; DB 2; Length 243;
 Best Local Similarity 100.0%; Pred. No. 6.1e-10;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
 |||||
 Db 218 CHHHASRVARMASDEFPSMC 237

RESULT 8

Q5ZPX6_ECOLI
 ID Q5ZPX6_ECOLI PRELIMINARY; PRT; 248 AA.
 AC Q5ZPX6;
 DT 23-NOV-2004, integrated into UniProtKB/TrEMBL.
 DT 23-NOV-2004, sequence version 1.
 DT 07-FEB-2006, entry version 8.
 DE Verocytotoxin 1 (Fragment).
 GN Name=VT1;
 OS Escherichia coli.
 OC Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
 OC Enterobacteriaceae; Escherichia.
 OX NCBI_TaxID=562;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=CH1;
 RA Catarama T.M.;
 RT "Rapid Diagnostic Methods for Food Borne Pathogens."
 RL Submitted (JAN-2003) to the EMBL/GenBank/DDBJ databases.
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 CC -----
 DR EMBL; AJ537519; CAD68992.1; -; Genomic_DNA.
 DR SMR; Q5ZPX6; 4-248.
 DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
 DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
 DR InterPro; IPR001574; RIP.
 DR Pfam; PF00161; RIP; 1.
 DR PRINTS; PR00396; SHIGARICIN.
 DR PROSITE; PS00275; SHIGA_RICIN; 1.
 FT NON_TER 1 1
 FT NON_TER 248 248
 SQ SEQUENCE 248 AA; 27190 MW; 653792826D462FED CRC64;

Query Match 100.0%; Score 114; DB 2; Length 248;
 Best Local Similarity 100.0%; Pred. No. 6.2e-10;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
|||||
Db 222 CHHHASRVARMASDEFPSMC 241

RESULT 9

Q5ZPX8_ECOLI

ID Q5ZPX8_ECOLI PRELIMINARY; PRT; 254 AA.

AC Q5ZPX8;

DT 23-NOV-2004, integrated into UniProtKB/TrEMBL.

DT 23-NOV-2004, sequence version 1.

DT 07-FEB-2006, entry version 8.

DE Verocytotoxin 1 (Fragment).

GN Name=VT1;

OS Escherichia coli.

OC Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;

OC Enterobacteriaceae; Escherichia.

OX NCBI_TaxID=562;

RN [1]

RP NUCLEOTIDE SEQUENCE.

RC STRAIN=361;

RA Catarama T.M.;

RT "Rapid Diagnostic Methods for Food Borne Pathogens.";

RL Submitted (JAN-2003) to the EMBL/GenBank/DDBJ databases.

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CC

DR EMBL; AJ537517; CAD68990.1; -; Genomic_DNA.

DR SMR; Q5ZPX8; 1-254.

DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.

DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.

DR InterPro; IPR001574; RIP.

DR Pfam; PF00161; RIP; 1.

DR PRINTS; PR00396; SHIGARICIN.

DR PROSITE; PS00275; SHIGA_RICIN; 1.

FT NON_TER 1 1

FT NON_TER 254 254

SQ SEQUENCE 254 AA; 27842 MW; AC3EF7F69D9D1A52 CRC64;

Query Match 100.0%; Score 114; DB 2; Length 254;

Best Local Similarity 100.0%; Pred. No. 6.4e-10;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
|||||
Db 228 CHHHASRVARMASDEFPSMC 247

RESULT 10

Q5ZPX9_ECOLI

ID Q5ZPX9_ECOLI PRELIMINARY; PRT; 259 AA.

AC Q5ZPX9;

DT 23-NOV-2004, integrated into UniProtKB/TrEMBL.

DT 23-NOV-2004, sequence version 1.

DT 07-FEB-2006, entry version 8.

DE Verocytotoxin 1 (Fragment).

GN Name=VT1;

OS Escherichia coli.

OC Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;

OC Enterobacteriaceae; Escherichia.

OX NCBI_TaxID=562;

RN [1]

RP NUCLEOTIDE SEQUENCE.

RC STRAIN=332;

RA Catarama T.M.;

RT "Rapid Diagnostic Methods for Food Borne Pathogens.";

RL Submitted (JAN-2003) to the EMBL/GenBank/DDBJ databases.

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CC

DR EMBL; AJ537516; CAD68989.1; -; Genomic_DNA.

DR SMR; Q5ZPX9; 15-259.

DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
 DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
 DR InterPro; IPR001574; RIP.
 DR Pfam; PF00161; RIP; 1.
 DR PRINTS; PR00396; SHIGARICIN.
 DR PROSITE; PS00275; SHIGA_RICIN; 1.
 FT NON_TER 1 1
 FT NON_TER 259 259
 SQ SEQUENCE 259 AA; 28482 MW; 774B2B9CD18F9175 CRC64;

Query Match 100.0%; Score 114; DB 2; Length 259;
 Best Local Similarity 100.0%; Pred. No. 6.5e-10;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
 |||||
 Db 233 CHHHASRVARMASDEFPSMC 252

RESULT 11

Q5ZPYO_ECOLI
 ID Q5ZPYO_ECOLI PRELIMINARY; PRT; 276 AA.
 AC Q5ZPYO;
 DT 23-NOV-2004, integrated into UniProtKB/TrEMBL.
 DT 23-NOV-2004, sequence version 1.
 DT 07-FEB-2006, entry version 8.
 DE Verocytotoxin 1 (Fragment).
 GN Name=VT1;
 OS Escherichia coli.
 OC Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
 OC Enterobacteriaceae; Escherichia.
 OX NCBI_TaxID=562;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=378;
 RA Catarame T.M.;
 RT "Rapid Diagnostic Methods for food Borne Pathogens."
 RL Submitted (JAN-2003) to the EMBL/GenBank/DDBJ databases.
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 CC -----
 DR EMBL; AJ537515; CAD68988.1; -; Genomic_DNA.
 DR SMR; Q5ZPYO; 1-276.
 DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.
 DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.
 DR InterPro; IPR001574; RIP.
 DR Pfam; PF00161; RIP; 1.
 DR PROSITE; PS00275; SHIGA_RICIN; 1.
 FT NON_TER 1 1
 FT NON_TER 276 276
 SQ SEQUENCE 276 AA; 30213 MW; 2BE68939E84D6378 CRC64;

Query Match 100.0%; Score 114; DB 2; Length 276;
 Best Local Similarity 100.0%; Pred. No. 7e-10;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
 |||||
 Db 233 CHHHASRVARMASDEFPSMC 252

RESULT 12

Q7WZI8_ECO57
 ID Q7WZI8_ECO57 PRELIMINARY; PRT; 313 AA.
 AC Q7WZI8;
 DT 01-OCT-2003, integrated into UniProtKB/TrEMBL.
 DT 01-OCT-2003, sequence version 1.
 DT 07-FEB-2006, entry version 11.
 DE Shiga toxin 1 variant A subunit.
 GN Name=stx1;
 OS Escherichia coli O157:H7.
 OC Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
 OC Enterobacteriaceae; Escherichia.
 OX NCBI_TaxID=83334;
 RN [1]

DR EMBL; M17358; AAA32229.1; -; Genomic_DNA.
 DR PIR; A27052; XUBPH9.
 DR PIR; A53887; A53887.
 DR SMR; P08026; 23-312.
 DR InterPro; IPR001574; RIP.
 DR Pfam; PF00161; RIP; 1.
 DR PROSITE; PS00275; SHIGA_RICIN; 1.
 KW Hydrolase; Protein synthesis inhibitor; Signal; Toxin.
 FT SIGNAL 1 22
 FT CHAIN 23 315 Shiga-like toxin I subunit A.
 FT /FTid=PRO_0000030791.
 FT ACT_SITE 189 189
 SQ SEQUENCE 315 AA; 34800 MW; 8B993DF7A8E58F30 CRC64;
 Query Match 100.0%; Score 114; DB 1; Length 315;
 Best Local Similarity 100.0%; Pred. No. 8.1e-10;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CHHHASRVARMASDEFPSMC 20
 |||||
 Db 264 CHHHASRVARMASDEFPSMC 283

RESULT 14

SLTA_BPH30
 ID SLTA_BPH30 STANDARD; PRT; 315 AA.
 AC P10149;
 DT 01-JUL-1989, integrated into UniProtKB/Swiss-Prot.
 DT 01-JUL-1989, sequence version 1.
 DT 07-FEB-2006, entry version 43.
 DE Shiga toxin A-chain precursor (EC 3.2.2.22) (rRNA N-glycosidase).
 GN Name=stxA;
 OS Bacteriophage H30.
 OC Viruses.
 OX NCBI_TaxID=12371;
 RN [1]
 RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
 RX MEDLINE=88139166; PubMed=2830229;
 RA Strockbine N.A., Jackson M.P., Sung L.M., Holmes R.K., O'Brien A.D.;
 RT "Cloning and sequencing of the genes for Shiga toxin from Shigella
 RT dysenteriae type 1.";
 RL J. Bacteriol. 170:1116-1122(1988).
 RN [2]
 RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
 RA Kozlov Y.V., Kabishev A.A., Fedchenko V.I., Bayev A.A.;
 RT "Cloning and primary structure of Shigella toxin genes.";
 RL Dokl. Biochem. 295:744-749(1987).
 RN [3]
 RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
 RX MEDLINE=89006281; PubMed=3049254; DOI=10.1016/0378-1119(88)90398-8;
 RA Kozlov Y.V., Kabishev A.A., Lukyanov E.V., Bayev A.A.;
 RT "The primary structure of the operons coding for Shigella dysenteriae
 RT toxin and temperature phage H30 shiga-like toxin.";
 RL Gene 67:213-221(1988).
 CC -!- FUNCTION: The A chain is responsible for inhibiting protein
 CC synthesis through the catalytic inactivation of 60S ribosomal
 CC subunits.
 CC -!- CATALYTIC ACTIVITY: Endohydrolysis of the N-glycosidic bond at one
 CC specific adenosine on the 28S rRNA.
 CC -!- SUBUNIT: Shiga toxin contains a single A-chain and five copies of
 CC B-chain.
 CC -!- SIMILARITY: Belongs to the ribosome-inactivating protein family.
 CC -----
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 CC -----
 DR EMBL; M19437; AAA98347.1; -; Genomic_DNA.
 DR EMBL; X07903; CAA30741.1; -; Genomic_DNA.
 DR EMBL; M24352; AAA26538.1; -; Genomic_DNA.
 DR EMBL; M23980; AAA72732.1; -; Genomic_DNA.
 DR SMR; P10149; 23-312.
 DR InterPro; IPR001574; RIP.
 DR Pfam; PF00161; RIP; 1.
 DR PROSITE; PS00275; SHIGA_RICIN; 1.
 KW Hydrolase; Protein synthesis inhibitor; Signal; Toxin.
 FT SIGNAL 1 22

```

FT CHAIN      23   315   Shiga toxin A-chain.
FT                                     /FTId=PRO_0000030790.
FT ACT_SITE   189   189   By similarity.
FT CONFLICT   67   67     T -> S (in Ref. 3).
FT CONFLICT   190  190     A -> P (in Ref. 2).
SQ SEQUENCE   315 AA;  34814 MW;  8A423DF7ABF58F30 CRC64;

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Query Match      100.0%; Score 114; DB 1; Length 315;
Best Local Similarity 100.0%; Pred. No. 8.1e-10;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 CHHHASRVARMASDEFPSMC 20
        |||
Db      264 CHHHASRVARMASDEFPSMC 283

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RESULT 15

Q5MBW7_9CAUD

ID Q5MBW7_9CAUD PRELIMINARY; PRT; 315 AA.

AC Q5MBW7;

DT 01-FEB-2005, integrated into UniProtKB/TrEMBL.

DT 01-FEB-2005, sequence version 1.

DT 07-FEB-2006, entry version 6.

DE StxA1.

GN Name=stxA1;

OS Stx1-converting phage phi-O153.

OC Viruses; dsDNA viruses, no RNA stage; Caudovirales; Siphoviridae;

OC Lambda-like viruses; unclassified Lambda-like viruses.

OX NCBI_TaxID=305853;

RN [1]

RP NUCLEOTIDE SEQUENCE.

RA Karalius B.J., Butterton J.R.;

RT "Nucleotide sequence of stx region of Stx1-producing rabbit E. coli

strain 0153:H-.";

RL Submitted (NOV-2004) to the EMBL/GenBank/DDBJ databases.

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CC

DR EMBL; AY838795; AAW21758.1; -; Genomic_DNA.

DR SMR; Q5MBW7; 23-312.

DR GO; GO:0016787; F:hydrolase activity; IEA.

DR GO; GO:0030598; F:rRNA N-glycosylase activity; IEA.

DR GO; GO:0017148; P:negative regulation of protein biosynthesis; IEA.

DR GO; GO:0009405; P:pathogenesis; IEA.

DR InterPro; IPR001574; RIP.

DR Pfam; PF00161; RIP; 1.

DR PROSITE; PS00275; SHIGA_RICIN; 1.

KW Hydrolase; Protein synthesis inhibitor; Toxin.

SQ SEQUENCE 315 AA; 34814 MW; 8A423DF7ABF58F30 CRC64;

```

Query Match      100.0%; Score 114; DB 2; Length 315;
Best Local Similarity 100.0%; Pred. No. 8.1e-10;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 CHHHASRVARMASDEFPSMC 20
        |||
Db      264 CHHHASRVARMASDEFPSMC 283

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Search completed: July 20, 2006, 09:53:06
Job time : 21.8035 secs

SCORE 1.3 BuildDate: 12/06/2005

SCORE Search Results Details for Application 10717243 and Search Result us-10-717-243-57.rag.

[Score Home](#) [Retrieve Application](#) [SCORE System](#) [SCORE](#) [Comments /](#)
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OM protein - protein search, using sw model

Run on: July 20, 2006, 09:35:59 ; Search time 16.1993 Seconds
(without alignments)
564.490 Million cell updates/sec

Title: US-10-717-243-57
Perfect score: 100
Sequence: 1 PSGQAGAAASESLFISNHAY 20

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2589679 seqs, 457216429 residues

Total number of hits satisfying chosen parameters: 2589679

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_8:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*
9: geneseqp2005s:*
10: geneseqp2006s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB ID	Description
1	100	100.0	20	2 AAR37301	Aar37301 Rabbit Mu
2	99	99.0	153	5 ABP42706	Abp42706 Human ova
3	99	99.0	363	2 AAY07116	Aay07116 Lung canc
4	99	99.0	364	2 AAY06992	Aay06992 Glycolyti
5	99	99.0	364	7 ADF76857	Adf76857 Novel hum
6	99	99.0	364	7 ADJ68731	Adj68731 Human hea
7	99	99.0	364	8 ADE77178	Ade77178 Human pro

8	99	99.0	364	8	ADI02918	Adi02918 Human fru
9	99	99.0	364	8	ADQ76754	Adq76754 Human fru
10	99	99.0	364	8	ABM81754	Abm81754 Tumour-as
11	99	99.0	364	8	ADU46860	Adu46860 Aldolase
12	99	99.0	364	9	ADX05876	Adx05876 Cyclin-de
13	99	99.0	364	9	ADZ70640	Adz70640 Human pro
14	99	99.0	364	9	ADZ70327	Adz70327 Human pro
15	99	99.0	364	10	AEF21053	Aef21053 human ado
16	99	99.0	364	10	AEF41979	Aef41979 Fructose-
17	97	97.0	22	9	ADV50900	Adv50900 Murine br
18	97	97.0	364	7	ADB79827	Adb79827 Rat aldol
19	95	95.0	31	3	AAB44017	Aab44017 Human can
20	95	95.0	364	10	AEE88055	Aee88055 Human pro
21	68	68.0	363	9	ADW08677	Adw08677 Human pro
22	68	68.0	364	5	ABP65148	Abp65148 Hypoxia-r
23	68	68.0	364	7	ADJ68292	Adj68292 Human hea
24	68	68.0	364	8	ADL12661	Adl12661 Human ste
25	68	68.0	364	10	AEF21055	Aef21055 human ado
26	68	68.0	364	10	AEF27175	Aef27175 Human ald
27	68	68.0	364	10	AEF41981	Aef41981 Fructose-
28	61	61.0	365	8	ADN23270	Adn23270 Bacterial
29	55.5	55.5	361	4	ABB66969	Abb66969 Drosophil
30	52	52.0	366	8	ADN23082	Adn23082 Bacterial
31	51	51.0	371	8	ADY10167	Ady10167 Plant ful
32	50.5	50.5	215	8	ABO60233	Abo60233 Human gen
33	50.5	50.5	836	7	ABR83671	Abr83671 Human bK1
34	50.5	50.5	836	7	ADM05015	Adm05015 Human pro
35	50.5	50.5	836	8	ADO85827	Ado85827 Different
36	50.5	50.5	836	9	AEC87945	Aec87945 Human cDN
37	48	48.0	1772	8	ADR12606	Adr12606 Gene vacc
38	47	47.0	1223	4	ABB63399	Abb63399 Drosophil
39	46	46.0	9	8	ADN63558	Adn63558 HLA bindi
40	46	46.0	9	8	ADN64270	Adn64270 HLA bindi
41	46	46.0	132	6	ABP96323	Abp96323 Human AGE
42	46	46.0	170	6	ABU01993	Abu01993 S. pneumo
43	46	46.0	170	8	ADK46838	Adk46838 Streptoco
44	46	46.0	171	8	ADR95229	Adr95229 Novel S.
45	46	46.0	171	9	AEA59099	Aea59099 Streptoco

ALIGNMENTS

RESULT 1

AAR37301

ID AAR37301 standard; protein; 20 AA.

XX

AC AAR37301;

XX

DT 25-MAR-2003 (revised)

DT 13-SEP-1993 (first entry)

XX

DE Rabbit Muscle aldolase peptide segment.

XX

KW Type I ribosome-inactivating protein; ricin; momordin; immunoconjugate;
 KW autoimmune disease; cell killing; toxin; human engineered antibody;
 KW variable region; light chain; cell targetting; chimeric antibody; RMA;
 KW linker.

XX

OS Oryctolagus cuniculus.

XX

FH Key Location/Qualifiers

FT Cleavage-site 1. .20

FT /note= "contains several potential cathepsin cleavage
 FT sites"

XX

PN W09309130-A1.

XX

PD 13-MAY-1993.

XX

PF 04-NOV-1992; 92WO-US009487.

XX

PR 04-NOV-1991; 91US-00787567.

PR 19-JUN-1992; 92US-00901707.

XX

PA (XOMA) XOMA CORP.

XX
 PI Bernhard SL, Better MD, Carroll SF, Lane JA, Lei SP;
 XX
 DR WPI; 1993-167617/20.
 XX
 PT Analogues of type I ribosome inactivating protein - useful as cytotoxic
 PT agents, immuno toxins for treating auto immune diseases, cancer, graft
 PT versus host disease and selective cell killing in=vivo.
 XX
 PS Example 10; Page 115; 163pp; English.
 XX
 CC The invention covers analogues of the plant type I RIP gelonin which have
 CC a non-naturally occurring Cys residue in a position which enables the
 CC analogue to be conjugated via a disulphide linkage to a molecule which
 CC specifically binds to a target cell. Pref. target-cell binding molecules
 CC are antibodies or their fragments, esp. human engineered H65 antibody
 CC fragments. Fusion constructs were assembled that included a natural
 CC sequence gelonin gene fused to an H65 truncated heavy chain gene or an
 CC H65 light chain (kappa) gene. A DNA linker encoding a peptide segment of
 CC the rabbit muscle aldolase was inserted between the gelonin gene and the
 CC Ab gene. The resulting immunoconjugates can be used as cytotoxic
 CC therapeutic agents. (Updated on 25-MAR-2003 to correct PN field.)
 XX
 SQ Sequence 20 AA;

Query Match 100.0%; Score 100; DB 2; Length 20;
 Best Local Similarity 100.0%; Pred. No. 9.9e-10;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
 |||||
 Db 1 PSGQAGAAASESLFISNHAY 20

RESULT 2
 ABP42706

ID ABP42706 standard; protein; 153 AA.
 XX
 AC ABP42706;
 XX
 DT 22-AUG-2002 (first entry)
 XX
 DE Human ovarian antigen HOPKN14, SEQ ID NO:3838.
 XX
 KW Human; ovarian antigen; ovary; ovarian; breast; cancer; tumour;
 KW ovarian cancer; breast cancer; tumour; reproductive system disorder;
 KW infertility; pregnancy disorder; anovulation; polycystic ovary syndrome;
 KW PCOS; ovarian cyst; dysmenorrhoea; endocrine disorder; infection;
 KW inflammatory condition; immune disorder; blood disorder;
 KW cardiovascular disorder; respiratory disorder; neurological disorder;
 KW gastrointestinal disorder; urinary system disorder; drug screening;
 KW gene therapy; chromosome mapping; forensic analysis;
 KW antibody preparation; cytostatic; immunomodulatory; neuroprotective;
 KW antiinflammatory; gynaecological; reproductive.
 XX
 OS Homo sapiens.
 XX
 PN W0200200677-A1.
 XX
 PD 03-JAN-2002.
 XX
 PF 07-JUN-2001; 2001WO-US018569.
 XX
 PR 07-JUN-2000; 2000US-0209467P.
 XX
 PA (HUMA-) HUMAN GENOME SCI INC.
 XX
 PI Birse CE, Rosen CA;
 XX
 DR WPI; 2002-147878/19.
 DR N-PSDB; ABQ55783.
 XX
 PT Isolated nucleic acid molecules encoding novel ovarian polypeptides,
 PT useful in the prevention, treatment and diagnosis of cancer (e.g. ovarian
 PT cancer), immune disorders, cardiovascular disorders and neurological
 PT diseases.

XX
PS Claim 11; SEQ ID NO 3838; 2922pp; English.
XX
CC The invention relates to 2175 novel human ovarian antigens (ABP41054-
CC ABP43228) and to cDNAs encoding them (ABQ54131-ABQ56305), and also
CC encompasses polypeptides 90% identical and polynucleotides 95% identical
CC to the sequences of the invention. The invention additionally relates to
CC recombinant vectors and host cells comprising human ovarian antigen
CC polynucleotides, antibodies against human ovarian antigens, and the use
CC of ovarian antigen polynucleotides and polypeptides in diagnosing,
CC treating, prognosing or preventing various ovary and/or breast-related
CC disorders. Such conditions include ovarian cancer and breast cancer, and
CC metastatic tumours of ovarian or breast origin, reproductive system
CC disorders (e.g., infertility, disorders of pregnancy, anovulation,
CC polycystic ovary syndrome, ovarian cysts, and dysmenorrhoea), endocrine
CC disorders, infections (e.g., chlamydia, HIV, toxoplasmosis, and toxic
CC shock syndrome), inflammatory conditions (e.g., mastitis, oophoritis and
CC vaginitis), immune disorders (e.g., congenital and acquired
CC immunodeficiencies, autoimmune oophoritis, systemic lupus erythematosus),
CC blood-related disorders (e.g., anaemia), cardiovascular disorders,
CC respiratory disorders, neurological disorders, gastrointestinal disorders
CC and urinary system disorders. Ovarian antigen polypeptides and
CC polynucleotides may also be used in screening for compounds which
CC modulate ovarian antigen expression or activity. The polynucleotides may
CC further be used for gene therapy, chromosome mapping, in the
CC identification of individuals and in forensic analysis, and the
CC polypeptides may be used as food additives or to prepare antibodies
CC useful in disease diagnosis, drug targeting and phenotyping. The present
CC sequence represents a human ovarian antigen of the invention. Note: The
CC sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format directly from WIPO
CC at ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 153 AA;

Query Match 99.0%; Score 99; DB 5; Length 153;
Best Local Similarity 95.0%; Pred. No. 1.6e-08;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
|||||:|||||
Db 134 PSGQAGAAASESLFVSNHAY 153

RESULT 3
AAY07116
ID AAY07116 standard; protein; 363 AA.
XX
AC AAY07116;
XX
DT 02-JUL-1999 (first entry)
XX
DE Lung cancer associated antigen precursor sequence.
XX
KW Cancer associated antigen; diagnosis; research; treatment; human;
KW breast cancer; colon cancer; gastric cancer; renal cancer; lung cancer;
KW prostate cancer.
XX
OS Homo sapiens.
XX
PN W09904265-A2.
XX
PD 28-JAN-1999.
XX
PF 15-JUL-1998; 98WO-US014679.
XX
PR 17-JUL-1997; 97US-00896164.
PR 10-OCT-1997; 97US-0061599P.
PR 10-OCT-1997; 97US-0061765P.
PR 10-OCT-1997; 97US-00948705.
PR 11-OCT-1997; 97GB-00021697.
PR 22-JUN-1998; 98US-00102322.
XX
PA (LUDW-) LUDWIG INST CANCER RES.
XX
PI Old LJ, Scanlan MJ, Stockert E, Gure A, Chen Y, Gout I;

PI O'hare M, Obata Y, Pfreundschuh M, Tureci O, Sahin U;
 XX
 DR WPI; 1999-132448/11.
 XX
 PT New isolated cancer associated nucleic acids and polypeptides - isolated
 PT using sera from cancer patients, used to develop products for the
 PT diagnosis, monitoring or treatment of cancers.
 XX
 PS Disclosure; Page 733-734; 787pp; English.
 XX
 CC The invention relates to a method for diagnosing a disorder characterised
 CC by expression of a human cancer associated antigen precursor coded for by
 CC a nucleic acid molecule (NAM). The method comprises: (a) contacting a
 CC biological sample isolated from a subject with an agent that specifically
 CC binds to the NAM, an expression product or a fragment of an expression
 CC product complexed with an HLA molecule; and (b) determining the
 CC interaction between the agent and the NAM or the expression product as a
 CC determination of the disorder. The products and methods can be used in
 CC the diagnosis, monitoring, research, or treatment of conditions
 CC characterised by the expression of various cancer associated antigens.
 CC The invention provides nucleic acid sequences and encoded polypeptides
 CC which are cancer associated antigen precursors expressed in human breast
 CC cancer, renal cancer, colon cancer, gastric cancer, prostate cancer and
 CC lung cancer
 XX
 SQ Sequence 363 AA;

Query Match 99.0%; Score 99; DB 2; Length 363;
 Best Local Similarity 95.0%; Pred. No. 4.4e-08;
 Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
 |||||:|||||
 Db 344 PSGQAGAAASESLFVSNHAY 363

RESULT 4

AAY06992

ID AAY06992 standard; protein; 364 AA.

XX

AC AAY06992;

XX

DT 02-JUL-1999 (first entry)

XX

DE Glycolytic enzyme aldolase A.

XX

KW Cancer associated antigen; diagnosis; research; treatment; human;
 KW breast cancer; colon cancer; gastric cancer; renal cancer; lung cancer;
 KW prostate cancer.

XX

OS Homo sapiens.

XX

PN W09904265-A2.

XX

PD 28-JAN-1999.

XX

PF 15-JUL-1998; 98WO-US014679.

XX

PR 17-JUL-1997; 97US-00896164.

PR 10-OCT-1997; 97US-0061599P.

PR 10-OCT-1997; 97US-0061765P.

PR 10-OCT-1997; 97US-00948705.

PR 11-OCT-1997; 97GB-00021697.

PR 22-JUN-1998; 98US-00102322.

XX

PA (LUDW-) LUDWIG INST CANCER RES.

XX

PI Old LJ, Scanlan MJ, Stockert E, Gure A, Chen Y, Gout I;

PI O'hare M, Obata Y, Pfreundschuh M, Tureci O, Sahin U;

XX

DR WPI; 1999-132448/11.

DR N-PSDB; AAX40193.

XX

PT New isolated cancer associated nucleic acids and polypeptides - isolated
 PT using sera from cancer patients, used to develop products for the
 PT diagnosis, monitoring or treatment of cancers.

XX
 PS Example 8; Page 769-770; 787pp; English.
 XX
 CC The invention relates to a method for diagnosing a disorder characterised
 CC by expression of a human cancer associated antigen precursor coded for by
 CC a nucleic acid molecule (NAM). The method comprises: (a) contacting a
 CC biological sample isolated from a subject with an agent that specifically
 CC binds to the NAM, an expression product or a fragment of an expression
 CC product complexed with an HLA molecule; and (b) determining the
 CC interaction between the agent and the NAM or the expression product as a
 CC determination of the disorder. The products and methods can be used in
 CC the diagnosis, monitoring, research, or treatment of conditions
 CC characterised by the expression of various cancer associated antigens.
 CC The invention provides nucleic acid sequences and encoded polypeptides
 CC which are cancer associated antigen precursors expressed in human breast
 CC cancer, renal cancer, colon cancer, gastric cancer, prostate cancer and
 CC lung cancer
 XX
 SQ Sequence 364 AA;

Query Match 99.0%; Score 99; DB 2; Length 364;
 Best Local Similarity 95.0%; Pred. No. 4.4e-08;
 Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
 |||||:|||||
 Db 345 PSGQAGAAASESLFVSNHAY 364

RESULT 5
 ADF76857
 ID ADF76857 standard; protein; 364 AA.
 XX
 AC ADF76857;
 XX
 DT 26-FEB-2004 (first entry)
 XX
 DE Novel human secreted and transmembrane protein SeqID 532.
 XX
 KW human; PRO; membrane bound protein; membrane bound receptor;
 KW cell proliferation; cell migration; cell differentiation;
 KW mitogenic factor; survival factor; cytotoxic factor;
 KW differentiation factor; neuropeptide; hormone; cell receptor;
 KW receptor-ligand interaction; cytostatic; chondrocyte; tumour.
 XX
 OS Homo sapiens.
 XX
 PN WO2003072035-A2.
 XX
 PD 04-SEP-2003.
 XX
 PF 21-FEB-2003; 2003WO-US005241.
 XX
 PR 22-FEB-2002; 2002US-0359461P.
 XX
 PA (GETH) GENENTECH INC.
 XX
 PI Bodary SC, Clark H, Hunte B, Jackman JK, Schoenfeld JR;
 PI Williams PM, Wood WI, Wu TD;
 XX
 DR WPI; 2003-721702/68.
 DR N-PSDB; ADF76856.
 XX
 PT New PRO polypeptides, useful for diagnosing and treating an immune
 PT related disorder, e.g. systemic lupus erythematosus, rheumatoid
 PT arthritis, osteoarthritis, juvenile chronic arthritis, thyroiditis or
 PT diabetes mellitus.
 XX
 PS Claim 10; SEQ ID NO 532; 918pp; English.
 XX
 CC This invention relates to novel nucleic acids encoding human PRO secreted
 CC and transmembrane proteins. Extracellular proteins play important roles
 CC in the formation, differentiation and maintenance of multicellular
 CC organisms. The fate of many individual cells (for example proliferation,
 CC migration or differentiation) is typically governed by information
 CC received from other cells and the immediate environment. The information

CC is often transmitted by secreted polypeptides (for example mitogenic
 CC factors, survival factors, cytotoxic factors, differentiation factors,
 CC neuropeptides and hormones) which are received and interpreted by diverse
 CC cell receptors or membrane bound proteins. These membrane bound proteins
 CC and receptors may be of use as pharmaceutical and diagnostic agents, such
 CC as in the blocking of receptor-ligand interactions. The current invention
 CC provides the amino acid sequences of novel human membrane bound receptors
 CC and proteins, along with the cDNA sequences encoding them. The novel
 CC proteins of the invention may have cytostatic activities through the
 CC stimulation of chondrocytes. The nucleic acids of the invention may be
 CC useful for the manufacture of a medicament for diagnosing or treating a
 CC tumour in a mammal. In addition, they may be useful for measuring or
 CC detecting the expression of a tumour associated gene. The present
 CC sequence is the amino acid sequence of a human PRO protein of the
 CC invention.
 XX
 SQ Sequence 364 AA;

Query Match 99.0%; Score 99; DB 7; Length 364;
 Best Local Similarity 95.0%; Pred. No. 4.4e-08;
 Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
 |||||
 Db 345 PSGQAGAAASESLFVSNHAY 364

RESULT 6

ADJ68731

ID ADJ68731 standard; protein; 364 AA.

XX

AC ADJ68731;

XX

DT 06-MAY-2004 (first entry)

XX

DE Human heat mitochondrial protein as a therapeutic target SeqID537.

XX

KW mitochondrial; human; screening assay; diabetes mellitus;

KW Huntington's disease; osteoarthritis;

KW Leber's hereditary optic neuropathy; LHON;

KW mitochondrial encephalopathy lactic acidosis and stroke; MELAS;

KW myoclonic epilepsy ragged red fibre syndrome; MERRF; cancer;

KW neuroprotective; nootropic; antidiabetic; anticonvulsant; antiarthritic;

KW osteopathic; ophthalmological; cytostatic.

XX

OS Homo sapiens.

XX

PN WO2003087768-A2.

XX

PD 23-OCT-2003.

XX

PF 04-APR-2003; 2003WO-US010870.

XX

PR 12-APR-2002; 2002US-0372843P.

PR 17-JUN-2002; 2002US-0389987P.

PR 20-SEP-2002; 2002US-0412418P.

XX

PA (MITO-) MITOKOR.

PA (BUCK-) BUCK INST AGE RES.

XX

PI Ghosh SS, Fahy ED, Zhang B, Gibson BW, Taylor SW, Glenn GM;

PI Warnock DE;

XX

DR WPI; 2003-845369/78.

XX

PT Identifying a mitochondrial target for drug screening assays and for
 PT treating diseases associated with altered mitochondrial function,
 PT comprises detecting a modified polypeptide in a sample and correlating
 PT with the disease.

XX

PS Claim 1; SEQ ID NO 537; 180pp; English.

XX

CC This invention relates to novel mitochondrial targets that can be used
 CC for therapeutic intervention in treating a disease associated with
 CC altered mitochondrial function. Specifically, it refers to a method for
 CC identifying proteins of the human heart mitochondrial proteome that are

CC useful for drug screening assays, as well as therapeutic targets. The
 CC present invention describes a method for identifying such proteins that
 CC can be used in the treatment of various diseases associated with altered
 CC mitochondrial function including diabetes mellitus, Huntington's disease,
 CC osteoarthritis, Leber's hereditary optic neuropathy (LHON), mitochondrial
 CC encephalopathy lactic acidosis and stroke (MELAS), myoclonic epilepsy
 CC ragged red fibre syndrome (MERRF) or cancer. Accordingly, these
 CC compositions have neuroprotective, nootropic, antidiabetic,
 CC anticonvulsant, antiarthritic, osteopathic, ophthalmological and
 CC cytostatic activities. This polypeptide sequence is a human heart
 CC mitochondrial protein of the invention.

XX
 SQ Sequence 364 AA;

Query Match 99.0%; Score 99; DB 7; Length 364;
 Best Local Similarity 95.0%; Pred. No. 4.4e-08;
 Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
 |||||
 Db 345 PSGQAGAAASESLFVSNHAY 364

RESULT 7

ADE77178

ID ADE77178 standard; protein; 364 AA.

XX

AC ADE77178;

XX

DT 29-JAN-2004 (first entry)

XX

DE Human protein expressed in a liver disorder #87.

XX

KW human; liver disorder; hyperlipidaemia; hypertension; type II diabetes;

KW tumour; liver; inflammatory disorder; immune response disorder;

KW high-throughput screening; differential gene expression; gene therapy.

XX

OS Homo sapiens.

XX

PN US2003108871-A1.

XX

PD 12-JUN-2003.

XX

PF 30-JUL-2001; 2001US-00919039.

XX

PR 28-JUL-2000; 2000US-0222113P.

XX

PA (KASE/) KASER M R.

XX

PI Kaser MR;

XX

DR WPI; 2004-031227/03.

DR N-PSDB; ADE77177.

XX

PT Composition comprising several cDNAs that are differentially expressed in
 PT treated human C3A liver cell cultures, useful for treating liver
 PT disorders.

XX

PS Claim 1; SEQ ID NO 343; 41pp; English.

XX

CC The invention relates to a composition comprising several cDNAs that are
 CC differentially expressed in a liver disorder. The composition is useful
 CC for treating liver disorder such as hyperlipidaemia, hypertension, type
 CC II diabetes, tumours of the liver and disorders of the inflammatory and
 CC immune response. The composition is useful for a high-throughput method
 CC of screening several molecules or compounds to identify a ligand which
 CC specifically binds a cDNA. A protein encoded by the cDNA is useful for a
 CC high-throughput method for using a protein to screen several molecules or
 CC compounds to identify at least one ligand which specifically binds the
 CC protein which involves combining the protein encoded by the cDNA with
 CC several of molecules or compounds under conditions to allow specific
 CC binding, and detecting specific binding between the protein and a
 CC molecule or compound, therefore identifying a ligand which specifically
 CC binds the protein. The composition is useful for detecting and
 CC quantifying differential gene expression, can be used in gene therapy, to
 CC formulate prognosis and to design a treatment regimen and to monitor the

CC efficacy of treatment. The present sequence represents the amino acid
CC sequence of a protein encoded by a cDNA differentially expressed in a
CC liver disorder.

XX

SQ Sequence 364 AA;

Query Match 99.0%; Score 99; DB 8; Length 364;
Best Local Similarity 95.0%; Pred. No. 4.4e-08;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
|||||||:|||||
Db 345 PSGQAGAAASESLFVSNHAY 364

RESULT 8

ADI02918

ID ADI02918 standard; protein; 364 AA.

XX

AC ADI02918;

XX

DT 22-APR-2004 (first entry)

XX

DE Human fructose-bisphosphate aldolase.

XX

KW gene database preparation; cDNA microarray; human;

KW fructose-bisphosphate aldolase; GP2; enzyme.

XX

OS Homo sapiens.

XX

PN JP2004005319-A.

XX

PD 08-JAN-2004.

XX

PF 10-JUN-2002; 2002JP-00168894.

XX

PR 24-APR-2002; 2002JP-00123176.

XX

PA (KAGA-) KAGAKU GIJUTSU SHINKO JIGYODAN.

PA (KOKU-) KOKURITSU SEISHIN SHINKEI CENT SOCHO.

XX

DR WPI; 2004-113174/12.

DR N-PSDB; ADI02917.

XX

PT Gene database production method for microarray preparation, comprises
PT searching homology of a candidate sequence determined by a primer probe
PT designing unit, for a matching candidate sequence.

XX

PS Disclosure; Fig 9; 33pp; Japanese.

XX

CC The invention relates to a method for preparing a gene database. The
CC method comprises a search unit searching homology of a candidate sequence
CC determined by a primer probe designing unit, for determining homologous
CC presence or absence of a determined candidate sequence. The method of the
CC invention is useful for the preparation of a microarray, such as a cDNA
CC microarray. The present amino acid sequence represents a human fructose-
CC bisphosphate aldolase.

XX

SQ Sequence 364 AA;

Query Match 99.0%; Score 99; DB 8; Length 364;
Best Local Similarity 95.0%; Pred. No. 4.4e-08;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
|||||||:|||||
Db 345 PSGQAGAAASESLFVSNHAY 364

RESULT 9

ADQ76754

ID ADQ76754 standard; protein; 364 AA.

XX

AC ADQ76754;

XX

DT 07-OCT-2004 (first entry)

XX
DE Human fructose biphosphate aldolase A, target for anti-HIV agent.
XX
KW Human; fructose biphosphate aldolase A; enzyme;
KW human immunodeficiency virus; HIV; anti-HIV; virucide.
XX
OS Homo sapiens.
XX
PN WO2004061088-A2.
XX
PD 22-JUL-2004.
XX
PF 30-DEC-2003; 2003WO-US041790.
XX
PR 30-DEC-2002; 2002US-0436936P.
XX
PA (PPDP-) PPD DEV LP.
XX
PI Dunn SJ;
XX
DR WPI; 2004-534379/51.
DR N-PSDB; ADQ76753.
XX
PT Use of an inhibitor of a member of a biological pathway for inhibiting,
PT suppressing, treating, or preventing human immunodeficiency virus (HIV)
PT infection.
XX
PS Claim 1; SEQ ID NO 22; 143pp; English.
XX
CC The present sequence is that of human fructose biphosphate aldolase A
CC (ALDOA), which has been identified as a cellular target for HIV
CC inhibition. The invention relates to methods for identifying human
CC cellular genes that encode products that are necessary for productive HIV
CC infection for use as targets in the design of therapeutic agents for
CC suppressing HIV infection. The invention also includes methods for
CC identifying biological pathways comprising the products of such cellular
CC genes, as well as substrates and metabolic products of these pathways,
CC and methods for identifying additional human cellular genes that encode
CC products comprising other members of such pathways for use as targets in
CC the design of therapeutic agents for suppressing HIV infection. It also
CC relates to methods for identifying protective compounds that inhibit HIV
CC infection and to the use of such compounds in the treatment or prevention
CC of HIV. The compounds include chemical compounds such as small molecule
CC inhibitors or substrate compounds such as products of chemical
CC combinatorial libraries, or biological compounds including peptides,
CC antisense molecules and antibodies. In one embodiment of the invention,
CC the target gene encodes a target product that is a member of the
CC glycolysis pathway of the host cell. Random fragment expression libraries
CC were constructed from mRNA isolated from HL-60 and HeLa cells, and from
CC phytohaemagglutinin-stimulated peripheral blood mononuclear cells (PBMC).
CC These were used for the isolation and identification of human cell-
CC derived genetic suppressor elements (GSEs) exhibiting HIV suppressive
CC activity. The human cellular genes from which these GSEs were derived
CC were identified, and included the ALDOA gene from a PBMC library.
XX
SQ Sequence 364 AA;

Query Match 99.0%; Score 99; DB 8; Length 364;
Best Local Similarity 95.0%; Pred. No. 4.4e-08;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
| | | | | | | | | | : | | | |
Db 345 PSGQAGAAASESLFVSNHAY 364

RESULT 10
ABM81754
ID ABM81754 standard; protein; 364 AA.
XX
AC ABM81754;
XX
DT 18-NOV-2004 (first entry)
XX
DE Tumour-associated antigenic target (TAT) polypeptide PRO69617, SEQ:4521.
XX

KW Tumour-associated antigenic target; TAT; human; overexpression; cancer;
 KW tumour; diagnosis; cell proliferative disorder; breast cancer;
 KW colorectal cancer; lung cancer; ovarian cancer; liver cancer;
 KW central nervous system cancer; bladder cancer; pancreatic cancer;
 KW cervical cancer; melanoma; leukaemia; hybridisation probe;
 KW chromosome identification; chromosome mapping; gene mapping;
 KW gene therapy; cytostatic.
 XX
 OS Homo sapiens.
 XX
 PN WO2004030615-A2.
 XX
 PD 15-APR-2004.
 XX
 PF 29-SEP-2003; 2003WO-US028547.
 XX
 PR 02-OCT-2002; 2002US-0414971P.
 XX
 PA (GETH) GENENTECH INC.
 XX
 PI Wu TD, Zhang Z, Zhou Y;
 XX
 DR WPI; 2004-347921/32.
 DR N-PSDB; ACN40010.
 XX
 PT New tumor-associated antigenic target polypeptides and nucleic acids,
 PT useful in preparing a medicament for treating or detecting a
 PT proliferative disorder, e.g. breast, lung, colorectal, ovarian or
 PT prostate cancer or tumor.
 XX
 PS Claim 12; SEQ ID NO 4521; 7273pp; English.
 XX
 CC The invention relates to human tumour-associated antigenic target (TAT)
 CC polypeptides, and their related nucleic acids. The TAT polypeptides are
 CC overexpressed in cancer tissues compared to normal tissues, and may thus
 CC serve as effective targets for the diagnosis and treatment of cancer in
 CC mammals. The invention also relates to nucleic acid and polypeptide
 CC sequences at least 80% identical to the TAT nucleic acids and
 CC polypeptides; expression vectors and host cells comprising a TAT nucleic
 CC acid; an antibody specific for a TAT polypeptide; a peptide or organic
 CC molecule which binds to a TAT polypeptide; fusion proteins comprising a
 CC TAT polypeptide; and methods and compositions for the treatment or
 CC diagnosis of cancer in mammals. TAT polypeptides, nucleic acids,
 CC antibodies, antagonists, binding molecules and compositions are useful
 CC for diagnosing or treating a cell proliferative disorder associated with
 CC increased TAT expression, particularly cancers such as breast cancer,
 CC colorectal cancer, lung cancer, ovarian cancer, liver cancer, bladder
 CC cancer, pancreatic cancer, cervical cancer, cancers of the central
 CC nervous system, melanoma and leukaemia. TAT nucleic acids may further be
 CC used as hybridisation probes, in chromosome and gene mapping, in
 CC chromosome identification and in gene therapy. The present sequence
 CC represents a TAT polypeptide of the invention
 XX
 SQ Sequence 364 AA;

Query Match 99.0%; Score 99; DB 8; Length 364;
 Best Local Similarity 95.0%; Pred. No. 4.4e-08;
 Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
 |||||:|||||
 Db 345 PSGQAGAAASESLFVSNHAY 364

RESULT 11
 ADU46860
 ID ADU46860 standard; protein; 364 AA.
 XX
 AC ADU46860;
 XX
 DT 27-JAN-2005 (first entry)
 XX
 DE Aldolase A fructose bisphosphate.
 XX
 KW mammal; breast; cancer; increased risk; prognosis; biomarker.
 XX

OS Homo sapiens.
 XX
 PN WO2004097030-A2.
 XX
 PD 11-NOV-2004.
 XX
 PF 28-APR-2004; 2004WO-US013076.
 XX
 PR 28-APR-2003; 2003US-0466084P.
 XX
 PA (BRIM) BRISTOL-MYERS SQUIBB CO.
 PA (KARO-) KAROLINSKA INNOVATIONS AB.
 XX
 PI Bergh J, Pawitan Y, Hall P, Amler LC, Han X, Huang F, Shaw P;
 XX
 DR WPI; 2004-804769/79.
 DR N-PSDB; ADU46827.
 DR GENBANK; NP_000025.
 XX
 PT Identifying a mammal at increased risk for developing breast cancer by
 PT correlating the level of at least one biomarker with a baseline level and
 PT identifying a mammal at increased risk for developing breast cancer based
 PT on the correlation.
 XX
 PS Claim 1; SEQ ID NO 50; 150pp; English.
 XX
 CC This sequence represents the aldolase A fructose bisphosphate. This
 CC sequence may be used in the method of the invention for identifying a
 CC mammal at increased risk for developing breast cancer. The method
 CC comprises correlating the level of at least one biomarker with a baseline
 CC level and identifying a mammal at increased risk for developing breast
 CC cancer based on the correlation. The method is useful for identifying a
 CC mammal at increased risk for developing breast cancer. Preferably, it is
 CC useful for prognosing breast cancer in a mammal and for identifying
 CC breast cancer in a mammal, by measuring the level of a biomarker such as
 CC a protein or an mRNA transcript of the biomarker.
 XX
 SQ Sequence 364 AA;

Query Match 99.0%; Score 99; DB 8; Length 364;
 Best Local Similarity 95.0%; Pred. No. 4.4e-08;
 Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
 |||||:|||||
 Db 345 PSGQAGAAASESLFVSNHAY 364

RESULT 12

ADX05876
 ID ADX05876 standard; protein; 364 AA.
 XX
 AC ADX05876;
 XX
 DT 21-APR-2005 (first entry)
 XX
 DE Cyclin-dependent kinase modulation biomarker SEQ ID NO 441.
 XX
 KW cytostatic; cyclin-dependent kinase; cdk; biomarker.
 XX
 OS Homo sapiens.
 XX
 PN WO2005012875-A2.
 XX
 PD 10-FEB-2005.
 XX
 PF 29-JUL-2004; 2004WO-US024424.
 XX
 PR 29-JUL-2003; 2003US-0490890P.
 XX
 PA (BRIM) BRISTOL-MYERS SQUIBB CO.
 XX
 PI Li M, Rupnow BA, Webster KR, Jackson DG, Wong TW;
 XX
 DR WPI; 2005-163068/17.
 DR N-PSDB; ADX05875.

XX
PT Biomarkers useful for predicting or determining the response of a mammal
PT to a cancer treatment comprising administration of a modulator of cyclin-
PT dependent kinase activity.
XX
PS Claim 5; SEQ ID NO 441; 141pp; English.
XX
CC This invention describes a novel method of predicting or determining
CC whether a mammal will respond or is responding to an anti-cancer agent
CC that modulates cyclin-dependent kinase (cdk) activity. The method
CC comprises measuring the level of one or more biomarkers selected from
CC 2774 biomarkers given in the specification (nucleotide sequence SEQ ID
CC NO:1246 (Genbank EST W28729) is especially preferred). The method of the
CC invention is utilized in a kit for determining or predicting whether
CC patient would be susceptible or resistant to treatment by an agent
CC modulating cdk activity. The invention also describes a method for
CC utilizing individualized genetic profiles for treating diseases and
CC disorders based on patient's response and molecular level, specialized
CC microarrays comprising the biomarkers described, antibodies directed
CC against the biomarkers and a cell culture model to identify biomarkers.
CC The cdk modulator is preferably N-5-[[5-(1,1-Dimethylethyl)-2-
CC oxazolyl]methyl]thio]-2-thiazolyl-4-piperidine carboxamide, 0.5-L-
CC tartaric acid salt. Note: The sequence data for this patent did not form
CC part of the printed specification, but was obtained in electronic format
CC directly from WIPO at ftp.wipo.int/pub/published_pct_sequences. This
CC sequence represents a biomarker used in the method of the invention.
XX
SQ Sequence 364 AA;

Query Match 99.0%; Score 99; DB 9; Length 364;
Best Local Similarity 95.0%; Pred. No. 4.4e-08;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
|||||
Db 345 PSGQAGAAASESLFVSNHAY 364

RESULT 13
ADZ70640
ID ADZ70640 standard; protein; 364 AA.
XX
AC ADZ70640;
XX
DT 30-JUN-2005 (first entry)
XX
DE Human protein from lung cancer marker gene ALDOA, SEQ ID 325.
XX
KW Tumor marker; lung tumor; cytostatic; neoplasm; expression;
KW DNA microarray.
XX
OS Homo sapiens.
XX
PN WO2005032495-A2.
XX
PD 14-APR-2005.
XX
PF 01-OCT-2004; 2004WO-US034163.
XX
PR 03-OCT-2003; 2003US-0508355P.
XX
PA (FARB) BAYER PHARM CORP.
XX
PI Taylor I, Pauloski NR, Bigwood D;
XX
DR WPI; 2005-285325/29.
DR N-PSDB; ADZ70639.
XX
PT Providing a patient diagnosis for lung cancer comprises comparing the
PT level of expression of genes or gene products in a biological sample from
PT the patient with that from a normal individual.
XX
PS Claim 3; SEQ ID NO 325; 60pp; English.
XX
CC The invention relates to providing a patient diagnosis for lung cancer
CC comprising comparing the level of expression of genes or gene products in

CC a biological sample from the patient with the level of expression of
 CC genes or gene products in a biological sample from a normal individual.
 CC Also included are distinguishing between normal and disease tissues,
 CC monitoring the response of a patient being treated for lung cancer by
 CC administering an anti-cancer agent, identifying a compound useful for the
 CC treatment of lung cancer and an array for distinguishing between normal
 CC and disease tissues (comprising 2 or more probes corresponding to 2 or
 CC more genes selected from any of the 200 nucleotide sequences given in the
 CC specification, or 2 or more polypeptides comprising any of the 20 amino
 CC acid sequences given in the specification). In providing a patient
 CC diagnosis for lung cancer, one or more genes are selected from any of the
 CC 200 nucleotide sequences as mentioned in the specification, or one or
 CC more gene products are polypeptides selected from any of the 20 amino
 CC acid sequences mentioned in the specification. The methods are useful for
 CC detecting and treating lung cancer. These may also be used for designing,
 CC identifying and optimizing therapeutics for cancer. The present sequence
 CC represents a protein from one of the 200 lung cancer marker genes. Note:
 CC The sequence data for this patent did not form part of the printed
 CC specification, but was obtained in electronic format directly from WIPO
 CC at ftp.wipo.int/pub/published_pct_sequences.
 XX
 SQ Sequence 364 AA;

Query Match 99.0%; Score 99; DB 9; Length 364;
 Best Local Similarity 95.0%; Pred. No. 4.4e-08;
 Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
 |||||:|||||
 Db 345 PSGQAGAAASESLFVSNHAY 364

RESULT 14

ADZ70327

ID ADZ70327 standard; protein; 364 AA.

XX

AC ADZ70327;

XX

DT 30-JUN-2005 (first entry)

XX

DE Human protein from lung cancer marker gene ALDOA, SEQ ID 12.

XX

KW Tumor marker; lung tumor; cytostatic; neoplasm; expression;
 KW DNA microarray.

XX

OS Homo sapiens.

XX

PN WO2005032495-A2.

XX

PD 14-APR-2005.

XX

PF 01-OCT-2004; 2004WO-US034163.

XX

PR 03-OCT-2003; 2003US-0508355P.

XX

PA (FARB) BAYER PHARM CORP.

XX

PI Taylor I, Pauloski NR, Bigwood D;

XX

DR WPI; 2005-285325/29.

DR

N-PSDB; ADZ70326.

XX

PT Providing a patient diagnosis for lung cancer comprises comparing the
 PT level of expression of genes or gene products in a biological sample from
 PT the patient with that from a normal individual.

XX

PS Claim 3; SEQ ID NO 12; 60pp; English.

XX

CC The invention relates to providing a patient diagnosis for lung cancer
 CC comprising comparing the level of expression of genes or gene products in
 CC a biological sample from the patient with the level of expression of
 CC genes or gene products in a biological sample from a normal individual.
 CC Also included are distinguishing between normal and disease tissues,
 CC monitoring the response of a patient being treated for lung cancer by
 CC administering an anti-cancer agent, identifying a compound useful for the
 CC treatment of lung cancer and an array for distinguishing between normal

CC and disease tissues (comprising 2 or more probes corresponding to 2 or
 CC more genes selected from any of the 200 nucleotide sequences given in the
 CC specification, or 2 or more polypeptides comprising any of the 200 amino
 CC acid sequences given in the specification). In providing a patient
 CC diagnosis for lung cancer, one or more genes are selected from any of the
 CC 200 nucleotide sequences as mentioned in the specification, or one or
 CC more gene products are polypeptides selected from any of the 20 amino
 CC acid sequences mentioned in the specification. The methods are useful for
 CC detecting and treating lung cancer. These may also be used for designing,
 CC identifying and optimizing therapeutics for cancer. The present sequence
 CC represents a protein from one of the 200 lung cancer marker genes. Note:
 CC The sequence data for this patent did not form part of the printed
 CC specification, but was obtained in electronic format directly from WIPO
 CC at ftp.wipo.int/pub/published_pct_sequences.

XX

SQ Sequence 364 AA;

Query Match 99.0%; Score 99; DB 9; Length 364;
 Best Local Similarity 95.0%; Pred. No. 4.4e-08;
 Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 PSGQAGAAASESLFISNHAY 20
 |||||:|||||
 Db 345 PSGQAGAAASESLFVSNHAY 364

RESULT 15

AEF21053

ID AEF21053 standard; protein; 364 AA.

XX

AC AEF21053;

XX

DT 09-MAR-2006 (first entry)

XX

DE human adolase A SEQ ID NO 1.

XX

KW diagnosis; protein interaction; retinal neovascularization;

KW ophthalmological; ocular disease; diabetic retinopathy; antidiabetic;

KW cardiovascular disease; antiinflammatory; edema;

KW age related macular degeneration; adolase A; enzyme.

XX

OS Homo sapiens.

XX

PN W02006004249-A1.

XX

PD 12-JAN-2006.

XX

PF 14-MAR-2005; 2005WO-KR000722.

XX

PR 06-JUL-2004; 2004KR-00052385.

XX

PA (KUHN-) KUHNIL PHARM CO LTD.

XX

PI Cho Y, Ahn B, Yoo W, Kwon O;

XX

DR WPI; 2006-090524/09.

DR REFSEQ; NP_908932.

XX

PT Composition useful for diagnosing retinal vascular disease, comprises
 PT aldolase such as aldolase A, aldolase B and aldolase C.

XX

PS Claim 2; SEQ ID NO 1; 45pp; English.

XX

CC The invention describes a composition (I) for diagnosing retinal vascular
 CC disease, comprising an aldolase. Also described are: a kit (II) for
 CC diagnosing retinal vascular disease, comprising an aldolase; and
 CC diagnosing (M1) retinal vascular disease, comprising: bringing a
 CC biological sample into contact with an aldolase; and detecting formed
 CC antigen-autoantibody complexes. (I) is useful for diagnosing retinal
 CC vascular disease, which is chosen from diabetic retinopathy, retinal
 CC edema and age-related macular degeneration. (I) enables simple, rapid,
 CC accurate and cost-effective diagnosis of the retinal vascular disease
 CC e.g. diabetic retinopathy. This is the amino acid sequence of human
 CC adolase A.

XX

SQ Sequence 364 AA;

Query Match 99.0%; Score 99; DB 10; Length 364;
Best Local Similarity 95.0%; Pred. No. 4.4e-08;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
|||||||:|||||
Db 345 PSGQAGAAASESLFVSNHAY 364

Search completed: July 20, 2006, 09:43:40
Job time : 19.1993 secs

SCORE 1.3 BuildDate: 12/06/2005

SCORE Search Results Details for Application 10717243 and Search Result us-10-717-243-57.ra1.

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OM protein - protein search, using sw model

Run on: July 20, 2006, 09:37:31 ; Search time 2.69373 Seconds
(without alignments)
649.885 Million cell updates/sec

Title: US-10-717-243-57
Perfect score: 100
Sequence: 1 PSGQAGAAASESLFISNHAY 20

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 650591 seqs, 87530628 residues

Total number of hits satisfying chosen parameters: 650591

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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5: /EMC_Celerra_SIDS3/ptodata/2/iaa/PCTUS_COMB.pep:*
6: /EMC_Celerra_SIDS3/ptodata/2/iaa/RE_COMB.pep:*
7: /EMC_Celerra_SIDS3/ptodata/2/iaa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	100	100.0	20	1	US-07-988-430-59	Sequence 59, Appl
2	100	100.0	20	1	US-08-425-336-57	Sequence 57, Appl
3	100	100.0	20	1	US-08-488-113B-57	Sequence 57, Appl
4	100	100.0	20	1	US-08-477-484B-57	Sequence 57, Appl
5	100	100.0	20	1	US-08-646-360-57	Sequence 57, Appl
6	100	100.0	20	2	US-08-839-765-57	Sequence 57, Appl
7	100	100.0	20	2	US-09-136-389-57	Sequence 57, Appl
8	100	100.0	20	2	US-09-610-838-57	Sequence 57, Appl
9	100	100.0	20	2	US-09-711-485-57	Sequence 57, Appl
10	100	100.0	20	5	PCT-US92-09487-59	Sequence 59, Appl

11	99	99.0	364	2	US-09-919-039-343	Sequence 343, App
12	99	99.0	419	2	US-09-949-016-8781	Sequence 8781, Ap
13	68	68.0	364	2	US-09-976-594-390	Sequence 390, App
14	46	46.0	170	2	US-09-583-110-3353	Sequence 3353, Ap
15	46	46.0	171	2	US-09-107-433-3864	Sequence 3864, Ap
16	46	46.0	377	2	US-09-949-016-9474	Sequence 9474, Ap
17	45	45.0	659	2	US-09-228-986-75	Sequence 75, Appl
18	45	45.0	659	2	US-10-101-464A-75	Sequence 75, Appl
19	45	45.0	736	2	US-09-252-991A-21498	Sequence 21498, A
20	44	44.0	176	2	US-09-252-991A-29061	Sequence 29061, A
21	44	44.0	863	2	US-09-252-991A-21831	Sequence 21831, A
22	43	43.0	200	2	US-09-540-236-3005	Sequence 3005, Ap
23	43	43.0	253	2	US-09-530-058-6	Sequence 6, Appli
24	43	43.0	593	2	US-09-252-991A-23340	Sequence 23340, A
25	43	43.0	697	2	US-09-949-016-9660	Sequence 9660, Ap
26	42	42.0	277	2	US-09-710-279-2802	Sequence 2802, Ap
27	42	42.0	278	2	US-09-252-991A-26039	Sequence 26039, A
28	42	42.0	461	2	US-09-122-210-2	Sequence 2, Appli
29	42	42.0	461	2	US-09-443-681-2	Sequence 2, Appli
30	42	42.0	626	2	US-09-949-016-6776	Sequence 6776, Ap
31	42	42.0	732	2	US-09-134-000C-6359	Sequence 6359, Ap
32	42	42.0	1017	2	US-09-134-001C-3542	Sequence 3542, Ap
33	42	42.0	1027	2	US-09-710-279-3106	Sequence 3106, Ap
34	41	41.0	139	2	US-09-270-767-36667	Sequence 36667, A
35	41	41.0	139	2	US-09-270-767-51884	Sequence 51884, A
36	41	41.0	244	2	US-09-068-804-38	Sequence 38, Appl
37	40	40.0	154	1	US-08-449-644-7	Sequence 7, Appli
38	40	40.0	154	1	US-08-087-244A-7	Sequence 7, Appli
39	40	40.0	291	2	US-10-094-749-2213	Sequence 2213, Ap
40	40	40.0	304	2	US-09-270-767-32299	Sequence 32299, A
41	40	40.0	304	2	US-09-270-767-47516	Sequence 47516, A
42	40	40.0	426	2	US-09-489-039A-8551	Sequence 8551, Ap
43	40	40.0	449	4	US-09-041-075A-21	Sequence 21, Appl
44	40	40.0	498	2	US-09-489-039A-13251	Sequence 13251, A
45	40	40.0	708	2	US-09-328-352-6131	Sequence 6131, Ap

ALIGNMENTS

RESULT 1

US-07-988-430-59

; Sequence 59, Application US/07988430

; Patent No. 5416202

; GENERAL INFORMATION:

; APPLICANT: Bernhard, Susan L.

; APPLICANT: Better, Marc D.

; APPLICANT: Carroll, Stephen F.

; APPLICANT: Lane, Julie A.

; APPLICANT: Lei, Shau-Ping

; TITLE OF INVENTION: Materials Comprising and Methods of

; TITLE OF INVENTION: Preparation and Use for Ribosome-Inactivating Proteins

; NUMBER OF SEQUENCES: 101

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray &

; ADDRESSEE: Bicknell

; STREET: Two First National Plaza, 20 South Clark

; STREET: Street

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60603

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/07/988,430

; FILING DATE: 19921209

; CLASSIFICATION: 435

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/901,707

; FILING DATE: 19-JUN-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/787,567

```

; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: No. 5416202and, Greta E.
; REGISTRATION NUMBER: 35302
; REFERENCE/DOCKET NUMBER: 31133
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (312) 346-5750
; TELEFAX: (312) 984-9740
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 59:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 20 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-07-988-430-59

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Query Match          100.0%; Score 100; DB 1; Length 20;
Best Local Similarity 100.0%; Pred. No. 2e-10;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 PSGQAGAAASESLFISNHAY 20
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Db      1 PSGQAGAAASESLFISNHAY 20

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RESULT 2

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US-08-425-336-57
; Sequence 57, Application US/08425336
; Patent No. 5621083
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 140
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/425,336
; FILING DATE: 18-APR-1995
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/064,691
; FILING DATE: 12-MAY-1993
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Meyers, Thomas C.
; REGISTRATION NUMBER: P-36,989
; REFERENCE/DOCKET NUMBER: 31394
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 57:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 20 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-425-336-57

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Query Match 100.0%; Score 100; DB 1; Length 20;
Best Local Similarity 100.0%; Pred. No. 2e-10;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
|||||
Db 1 PSGQAGAAASESLFISNHAY 20

RESULT 3

US-08-488-113B-57

; Sequence 57, Application US/08488113B

; Patent No. 5744580

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; APPLICANT: Carroll, Stephen F.

; APPLICANT: Studnika, Gary M.

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating

; TITLE OF INVENTION: Proteins

; NUMBER OF SEQUENCES: 169

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: McAndrews, Held & Malloy, Ltd.

; STREET: 500 West Madison Street, 34th floor

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60661

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/488,113B

; FILING DATE: 07-JUN-1995

; CLASSIFICATION: 530

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/425,336

; FILING DATE: 18-APR-1995

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/064,691

; FILING DATE: 12-MAY-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/988,430

; FILING DATE: 09-DEC-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/901,707

; FILING DATE: 19-JUN-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/787,567

; FILING DATE: 04-NOV-1991

; ATTORNEY/AGENT INFORMATION:

; NAME: McNicholas, Janet M.

; REGISTRATION NUMBER: 32,918

; REFERENCE/DOCKET NUMBER: 11022US07/200-70.P3.C2A

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 312/707-8889

; TELEFAX: 312/707-9155

; TELEX: 650 388-1248

; INFORMATION FOR SEQ ID NO: 57:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 20 amino acids

; TYPE: amino acid

; TOPOLOGY: linear

; MOLECULE TYPE: peptide

US-08-488-113B-57

Query Match 100.0%; Score 100; DB 1; Length 20;
Best Local Similarity 100.0%; Pred. No. 2e-10;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
|||||
Db 1 PSGQAGAAASESLFISNHAY 20

RESULT 4
 US-08-477-484B-57
 ; Sequence 57, Application US/08477484B
 ; Patent No. 5756699
 ; GENERAL INFORMATION:
 ; APPLICANT: Better, Marc D.
 ; APPLICANT: Carroll, Stephen F.
 ; APPLICANT: Studnika, Gary M.
 ; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
 ; TITLE OF INVENTION: Proteins
 ; NUMBER OF SEQUENCES: 169
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
 ; STREET: 500 West Madison Street, 34th floor
 ; CITY: Chicago
 ; STATE: Illinois
 ; COUNTRY: USA
 ; ZIP: 60661
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: PatentIn Release #1.0, Version #1.25
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/477,484B
 ; FILING DATE: 07-JUN-1995
 ; CLASSIFICATION: 530
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/425,336
 ; FILING DATE: 18-APR-1995
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/064,691
 ; FILING DATE: 12-MAY-1993
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 07/988,430
 ; FILING DATE: 09-DEC-1992
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 07/901,707
 ; FILING DATE: 19-JUN-1992
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 07/787,567
 ; FILING DATE: 04-NOV-1991
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: McNicholas, Janet M.
 ; REGISTRATION NUMBER: 32,918
 ; REFERENCE/DOCKET NUMBER: 11022US07/200-70.P3.C2A
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: 312/707-8889
 ; TELEFAX: 312/707-9155
 ; TELEX: 650 388-1248
 ; INFORMATION FOR SEQ ID NO: 57:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 20 amino acids
 ; TYPE: amino acid
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: peptide
 US-08-477-484B-57

Query Match 100.0%; Score 100; DB 1; Length 20;
 Best Local Similarity 100.0%; Pred. No. 2e-10;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
 |||||
 Db 1 PSGQAGAAASESLFISNHAY 20

RESULT 5
 US-08-646-360-57
 ; Sequence 57, Application US/08646360
 ; Patent No. 5837491
 ; GENERAL INFORMATION:
 ; APPLICANT: Better, Marc D.
 ; APPLICANT: Carroll, Stephen F.
 ; APPLICANT: Studnika, Gary M.

```

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 173
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/646,360
; FILING DATE: 13-MAY-1996
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/US94/05348
; FILING DATE: 12-MAY-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 200-70.P4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 57:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 20 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-646-360-57

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Query Match          100.0%; Score 100; DB 1; Length 20;
Best Local Similarity 100.0%; Pred. No. 2e-10;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 PSGQAGAAASESLFISNHAY 20
        |||
Db      1 PSGQAGAAASESLFISNHAY 20

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RESULT 6

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US-08-839-765-57
; Sequence 57, Application US/08839765
; Patent No. 6146631
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 169
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA

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; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/839,765
; FILING DATE: 15-APR-1997
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/425,336
; FILING DATE: 18-APR-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 11022US09/200-70.P3.C3
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 57:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 20 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-839-765-57

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```

Query Match      100.0%; Score 100; DB 2; Length 20;
Best Local Similarity 100.0%; Pred. No. 2e-10;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 PSGQAGAAASESLFISNHAY 20
        |||
Db      1 PSGQAGAAASESLFISNHAY 20

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RESULT 7

US-09-136-389-57

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; Sequence 57, Application US/09136389
; Patent No. 6146850
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 173
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/136,389
; FILING DATE:

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; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/646,360
; FILING DATE: 13-MAY-1996
; APPLICATION NUMBER: PCT/US94/05348
; FILING DATE: 12-MAY-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 200-70.P4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 57:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 20 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-09-136-389-57

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Query Match          100.0%; Score 100; DB 2; Length 20;
Best Local Similarity 100.0%; Pred. No. 2e-10;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 PSGQAGAAASESLFISNHAY 20
        ||||||||||||||||
Db      1 PSGQAGAAASESLFISNHAY 20

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RESULT 8

US-09-610-838-57

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; Sequence 57, Application US/09610838
; Patent No. 6376217
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 173
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/610,838
; FILING DATE: 06-JUL-2000
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/09/136,389
; FILING DATE: 18-AUG-1998
; APPLICATION NUMBER: 08/646,360
; FILING DATE: 13-MAY-1996
; APPLICATION NUMBER: PCT/US94/05348

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; FILING DATE: 12-MAY-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 200-70.P4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 57:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 20 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-09-610-838-57.

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Query Match          100.0%; Score 100; DB 2; Length 20;
Best Local Similarity 100.0%; Pred. No. 2e-10;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 PSGQAGAAASESLFISNHAY 20
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Db      1 PSGQAGAAASESLFISNHAY 20

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RESULT 9

US-09-711-485-57

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; Sequence 57, Application US/09711485
; Patent No. 6649742
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 169
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/711,485
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/839,765
; FILING DATE:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707

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; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 11022US09/200-70.P3.C3
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 57:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 20 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-09-711-485-57

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Query Match          100.0%; Score 100; DB 2; Length 20;
Best Local Similarity 100.0%; Pred. No. 2e-10;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 PSGQAGAAASESLFISNHAY 20
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Db      1 PSGQAGAAASESLFISNHAY 20

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RESULT 10

PCT-US92-09487-59

; Sequence 59, Application PC/TUS9209487

; GENERAL INFORMATION:

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; APPLICANT: Bernhard, Susan L.
; APPLICANT: Better, Marc D.
; APPLICANT: Carroll, Stephen F.
; APPLICANT: Lane, Julie A.
; APPLICANT: Lei, Shau-Ping
; TITLE OF INVENTION: Materials Comprising and Methods of
; TITLE OF INVENTION: Preparation and Use for Ribosome-Inactivating Proteins
; NUMBER OF SEQUENCES: 101
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray &
; ADDRESSEE: Bicknell
; STREET: Two First National Plaza, 20 South Clark
; STREET: Street
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60603

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; COMPUTER READABLE FORM:

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; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25

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; CURRENT APPLICATION DATA:

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; APPLICATION NUMBER: PCT/US92/09487
; FILING DATE: 19921104
; CLASSIFICATION:

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; PRIOR APPLICATION DATA:

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; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992

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; PRIOR APPLICATION DATA:

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; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991

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; ATTORNEY/AGENT INFORMATION:

```

; NAME: Noland, Greta E.
; REGISTRATION NUMBER: 35302
; REFERENCE/DOCKET NUMBER: 31133

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; TELECOMMUNICATION INFORMATION:

```

; TELEPHONE: (312) 346-5750
; TELEFAX: (312) 984-9740
; TELEX: 25-3856

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; INFORMATION FOR SEQ ID NO: 59:

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; SEQUENCE CHARACTERISTICS:
; LENGTH: 20 amino acids

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; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
PCT-US92-09487-59

Query Match 100.0%; Score 100; DB 5; Length 20;
Best Local Similarity 100.0%; Pred. No. 2e-10;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
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Db 1 PSGQAGAAASESLFISNHAY 20

RESULT 11

US-09-919-039-343
; Sequence 343, Application US/09919039
; Patent No. 6727066
; GENERAL INFORMATION:
; APPLICANT: Kaser, Matthew R.
; TITLE OF INVENTION: GENES EXPRESSED IN TREATED HUMAN C3A LIVER CELL CULTURES
; FILE REFERENCE: PA-0035 US
; CURRENT APPLICATION NUMBER: US/09/919,039
; CURRENT FILING DATE: 2002-09-09
; PRIOR APPLICATION NUMBER: 60/222,113
; PRIOR FILING DATE: 2000-07-28
; NUMBER OF SEQ ID NOS: 401
; SOFTWARE: PERL Program
; SEQ ID NO 343
; LENGTH: 364
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc feature
; OTHER INFORMATION: Incyte ID No. 6727066 2706606CD1
US-09-919-039-343

Query Match 99.0%; Score 99; DB 2; Length 364;
Best Local Similarity 95.0%; Pred. No. 1.1e-08;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
| | | | | | | | | | | | | | | | | |
Db 345 PSGQAGAAASESLFVSNHAY 364

RESULT 12

US-09-949-016-8781
; Sequence 8781, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
; APPLICANT: VENTER, J. Craig et al.
; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
; FILE REFERENCE: CL001307
; CURRENT APPLICATION NUMBER: US/09/949,016
; CURRENT FILING DATE: 2000-04-14
; PRIOR APPLICATION NUMBER: 60/241,755
; PRIOR FILING DATE: 2000-10-20
; PRIOR APPLICATION NUMBER: 60/237,768
; PRIOR FILING DATE: 2000-10-03
; PRIOR APPLICATION NUMBER: 60/231,498
; PRIOR FILING DATE: 2000-09-08
; NUMBER OF SEQ ID NOS: 207012
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 8781
; LENGTH: 419
; TYPE: PRT
; ORGANISM: Human
US-09-949-016-8781

Query Match 99.0%; Score 99; DB 2; Length 419;
Best Local Similarity 95.0%; Pred. No. 1.3e-08;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20

|||||:||||
Db 400 PSGQAGAAASESLFVSNHAY 419

RESULT 13

US-09-976-594-390
; Sequence 390, Application US/09976594
; Patent No. 6673549
; GENERAL INFORMATION:
; APPLICANT: Furness, Michael
; APPLICANT: Buchbinder, Jenny
; TITLE OF INVENTION: GENES EXPRESSED IN C3A LIVER CELL CULTURES TREATED WITH STEROIDS
; FILE REFERENCE: PA-0041 US
; CURRENT APPLICATION NUMBER: US/09/976,594
; CURRENT FILING DATE: 2001-10-12
; PRIOR APPLICATION NUMBER: 60/240,409
; PRIOR FILING DATE: 2000-10-12
; NUMBER OF SEQ ID NOS: 1143
; SOFTWARE: PERL Program
; SEQ ID NO 390
; LENGTH: 364
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc_feature
; OTHER INFORMATION: Incyte ID No. 6673549 2705321CD1
US-09-976-594-390

Query Match 68.0%; Score 68; DB 2; Length 364;
Best Local Similarity 63.2%; Pred. No. 0.0022;
Matches 12; Conservative 5; Mismatches 2; Indels 0; Gaps 0;

Qy 2 SGQAGAAASESLFISNHAY 20
||: | ||: ||: |||
Db 346 SGEDGGAAQSLYIANHAY 364

RESULT 14

US-09-583-110-3353
; Sequence 3353, Application US/09583110
; Patent No. 6699703
; GENERAL INFORMATION:
; APPLICANT: Lynn Doucette-Stamm et al.
; TITLE OF INVENTION: Nucleic Acid and Amino Acid Sequences Relating to Streptococcus
; TITLE OF INVENTION: Pneumoniae for Diagnostics and Therapeutics
; FILE REFERENCE: PATH00-07A
; CURRENT APPLICATION NUMBER: US/09/583,110
; CURRENT FILING DATE: 2000-05-26
; PRIOR APPLICATION NUMBER: US 09/107,433
; PRIOR FILING DATE: 1998-06-30
; PRIOR APPLICATION NUMBER: US 60/085,131
; PRIOR FILING DATE: 1998-05-12
; PRIOR APPLICATION NUMBER: US 60/051,553
; PRIOR FILING DATE: 1997-07-02
; NUMBER OF SEQ ID NOS: 5322
; SEQ ID NO 3353
; LENGTH: 170
; TYPE: PRT
; ORGANISM: Streptococcus pneumoniae
US-09-583-110-3353

Query Match 46.0%; Score 46; DB 2; Length 170;
Best Local Similarity 52.4%; Pred. No. 5;
Matches 11; Conservative 0; Mismatches 8; Indels 2; Gaps 1;

Qy 2 SGQAGAAASE--SLFISNHAY 20
|||| | | |||
Db 42 SGQAGVVCQEPADFFESNHLY 62

RESULT 15

US-09-107-433-3864
; Sequence 3864, Application US/09107433
; Patent No. 6800744
; GENERAL INFORMATION:
; APPLICANT: Lynn A Doucette-Stamm and David Bush

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; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID
; SEQUENCES RELATING TO STREPTOCOCCUS PNEUMONIAE FOR DIAGNOSTICS AND
; THERAPEUTICS
; NUMBER OF SEQUENCES: 5206
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: GENOME THERAPEUTICS CORPORATION
; STREET: 100 Beaver Street
; CITY: Waltham
; STATE: Massachusetts
; COUNTRY: USA
; ZIP: 02354
; COMPUTER READABLE FORM:
; MEDIUM TYPE: CD-ROM ISO9660
; COMPUTER:
; OPERATING SYSTEM:
; SOFTWARE:
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/107,433
; FILING DATE: 30-Jun-1998
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 60/ 085131
; FILING DATE: May 12, 1998
; APPLICATION NUMBER: 60/051553
; FILING DATE: July 2, 1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Ariniello, Pamela Deneke
; REGISTRATION NUMBER: 40,489
; REFERENCE/DOCKET NUMBER: GTC-011
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (781)893-5007
; TELEFAX: (781)893-8277
; INFORMATION FOR SEQ ID NO: 3864:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 171 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; HYPOTHETICAL: YES
; ORIGINAL SOURCE:
; ORGANISM: Streptococcus pneumoniae
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (B) LOCATION 1...171
; SEQUENCE DESCRIPTION: SEQ ID NO: 3864:
US-09-107-433-3864

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Query Match      46.0%; Score 46; DB 2; Length 171;
Best Local Similarity 52.4%; Pred. No. 5.1;
Matches 11; Conservative 0; Mismatches 8; Indels 2; Gaps 1;

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Qy      2 SGQAGAAASE--SLFISNHAY 20
        |||||  |  | ||| |
Db      43 SGQAGVVCQEPADFFESNHLY 63

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Search completed: July 20, 2006, 09:38:55
Job time : 3.69373 secs

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SCORE 1.3 BuildDate: 12/06/2005

SCORE Search Results Details for Application 10717243 and Search Result us-10-717-243-57.rapbm.

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OM protein - protein search, using sw model

Run on: July 20, 2006, 09:40:12 ; Search time 6.49446 Seconds
(without alignments)
1426.491 Million cell updates/sec

Title: US-10-717-243-57
Perfect score: 100
Sequence: 1 PSGQAGAAASESLFISNHAY 20

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2097797 seqs, 463214858 residues

Total number of hits satisfying chosen parameters: 2097797

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_AA_Main:*
1: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US07_PUBCOMB.pep:*
2: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
3: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US09_PUBCOMB.pep:*
4: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US10A_PUBCOMB.pep:*
5: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*
6: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US11_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Match	Query Length	DB ID	Description
1	100	100.0	20	4	US-10-127-890-57
2	100	100.0	20	5	US-10-717-243-57
3	99	99.0	153	4	US-10-264-049-3838
4	99	99.0	364	3	US-09-919-039-343
5	99	99.0	364	4	US-10-408-765A-537
6	99	99.0	364	5	US-10-370-715B-532
7	97	97.0	364	4	US-10-205-219-67
8	96	96.0	112	4	US-10-425-115-196160
9	95	95.0	31	3	US-09-925-301-1462
10	68	68.0	363	5	US-10-878-556A-14
11	68	68.0	364	4	US-10-170-385-259

12	68	68.0	364	4	US-10-408-765A-98	Sequence 98, Appl
13	61	61.0	365	4	US-10-369-493-5923	Sequence 5923, Ap
14	55.5	55.5	361	4	US-10-108-605-255	Sequence 255, App
15	55.5	55.5	361	6	US-11-097-143-27699	Sequence 27699, A
16	52	52.0	366	4	US-10-369-493-5735	Sequence 5735, Ap
17	51	51.0	358	4	US-10-767-701-46629	Sequence 46629, A
18	51	51.0	361	4	US-10-425-115-269098	Sequence 269098,
19	51	51.0	371	4	US-10-425-114-65982	Sequence 65982, A
20	51	51.0	371	4	US-10-425-115-269100	Sequence 269100,
21	50.5	50.5	215	4	US-10-029-386-33867	Sequence 33867, A
22	50.5	50.5	836	4	US-10-108-260A-3700	Sequence 3700, Ap
23	47	47.0	1223	6	US-11-097-143-16989	Sequence 16989, A
24	46	46.0	9	5	US-10-530-061-158	Sequence 158, App
25	46	46.0	9	5	US-10-530-061-870	Sequence 870, App
26	46	46.0	98	4	US-10-424-599-161041	Sequence 161041,
27	46	46.0	132	4	US-10-484-364-2	Sequence 2, Appli
28	46	46.0	170	5	US-10-472-928-3140	Sequence 3140, Ap
29	46	46.0	171	5	US-10-617-320-3864	Sequence 3864, Ap
30	46	46.0	332	4	US-10-425-114-44042	Sequence 44042, A
31	46	46.0	355	4	US-10-425-114-44220	Sequence 44220, A
32	46	46.0	355	4	US-10-425-114-45677	Sequence 45677, A
33	46	46.0	358	4	US-10-424-599-222971	Sequence 222971,
34	46	46.0	364	4	US-10-177-293-8	Sequence 8, Appli
35	46	46.0	372	4	US-10-425-114-43852	Sequence 43852, A
36	46	46.0	372	4	US-10-425-114-44097	Sequence 44097, A
37	46	46.0	372	4	US-10-425-114-44837	Sequence 44837, A
38	46	46.0	375	4	US-10-425-114-45592	Sequence 45592, A
39	46	46.0	375	4	US-10-425-114-51423	Sequence 51423, A
40	46	46.0	375	4	US-10-425-114-55978	Sequence 55978, A
41	46	46.0	375	4	US-10-425-114-55981	Sequence 55981, A
42	46	46.0	392	4	US-10-437-963-151748	Sequence 151748,
43	46	46.0	416	4	US-10-437-963-180885	Sequence 180885,
44	46	46.0	644	4	US-10-408-765A-1196	Sequence 1196, Ap
45	46	46.0	902	4	US-10-029-386-32110	Sequence 32110, A

ALIGNMENTS

RESULT 1

US-10-127-890-57

; Sequence 57, Application US/10127890

; Publication No. US20030166196A1

; GENERAL INFORMATION:

; APPLICANT: Better, Marc D.

; Carroll, Stephen F.

; Studnika, Gary M.

; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; Proteins

; NUMBER OF SEQUENCES: 173

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: McAndrews, Held & Malloy, Ltd.

; STREET: 500 West Madison Street, 34th floor

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60661

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/10/127,890

; FILING DATE: 23-Apr-2002

; CLASSIFICATION:

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US/08/646,360

; FILING DATE: 13-MAY-1996

; APPLICATION NUMBER: PCT/US94/05348

; FILING DATE: 12-MAY-1994

; APPLICATION NUMBER: US 08/064,691

; FILING DATE: 12-MAY-1993

; APPLICATION NUMBER: US 07/988,430

; FILING DATE: 09-DEC-1992

; APPLICATION NUMBER: US 07/901,707

```

; FILING DATE: 19-JUN-1992
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 200-70.P4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 57:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 20 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; SEQUENCE DESCRIPTION: SEQ ID NO: 57:
US-10-127-890-57

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Query Match          100.0%; Score 100; DB 4; Length 20;
Best Local Similarity 100.0%; Pred. No. 6.5e-09;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 PSGQAGAAASESLFISNHAY 20
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Db      1 PSGQAGAAASESLFISNHAY 20

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RESULT 2

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US-10-717-243-57
; Sequence 57, Application US/10717243
; Publication No. US20050054835A1
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
;           Carroll, Stephen F.
;           Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
;                   Proteins
; NUMBER OF SEQUENCES: 169
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/717,243
; FILING DATE: 18-Nov-2003
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/839,765
; FILING DATE: 15-APR-1997
; APPLICATION NUMBER: US 08/425,336
; FILING DATE: 18-APR-1995
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 11022US09/200-70.P3.C3
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155

```

TELEX: 650 388-1248
INFORMATION FOR SEQ ID NO: 57:
SEQUENCE CHARACTERISTICS:
LENGTH: 20 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
SEQUENCE DESCRIPTION: SEQ ID NO: 57:
US-10-717-243-57

Query Match 100.0%; Score 100; DB 5; Length 20;
Best Local Similarity 100.0%; Pred. No. 6.5e-09;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
|||||
Db 1 PSGQAGAAASESLFISNHAY 20

RESULT 3

US-10-264-049-3838
; Sequence 3838, Application US/10264049
; Publication No. US20040005579A1
; GENERAL INFORMATION:
; APPLICANT: Birse et al.
; TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
; FILE REFERENCE: PA133P1
; CURRENT APPLICATION NUMBER: US/10/264,049
; CURRENT FILING DATE: 2002-10-04
; PRIOR APPLICATION NUMBER: PCT/US01/18569
; PRIOR FILING DATE: 2001-06-07
; PRIOR APPLICATION NUMBER: US 60/209,467
; PRIOR FILING DATE: 2000-06-07
; NUMBER OF SEQ ID NOS: 4360
; SOFTWARE: PatentIn Ver. 3.1
; SEQ ID NO 3838
; LENGTH: 153
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-264-049-3838

Query Match 99.0%; Score 99; DB 4; Length 153;
Best Local Similarity 95.0%; Pred. No. 8.7e-08;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
|||||:|||||
Db 134 PSGQAGAAASESLFVSNHAY 153

RESULT 4

US-09-919-039-343
; Sequence 343, Application US/09919039
; Publication No. US20030108871A1
; GENERAL INFORMATION:
; APPLICANT: Kaser, Matthew R.
; TITLE OF INVENTION: GENES EXPRESSED IN TREATED HUMAN C3A LIVER CELL CULTURES
; FILE REFERENCE: PA-0035 US
; CURRENT APPLICATION NUMBER: US/09/919,039
; CURRENT FILING DATE: 2002-09-09
; PRIOR APPLICATION NUMBER: 60/222,113
; PRIOR FILING DATE: 2000-07-28
; NUMBER OF SEQ ID NOS: 401
; SOFTWARE: PERL Program
; SEQ ID NO 343
; LENGTH: 364
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc feature
; OTHER INFORMATION: Incyte ID No. US20030108871A1 2706606CD1
US-09-919-039-343

Query Match 99.0%; Score 99; DB 3; Length 364;
Best Local Similarity 95.0%; Pred. No. 2.2e-07;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
|||||||:|||||
Db 345 PSGQAGAAASESLFVSNHAY 364

RESULT 5

US-10-408-765A-537
; Sequence 537, Application US/10408765A
; Publication No. US20040101874A1
; GENERAL INFORMATION:
; APPLICANT: Ghosh, Soumitra S.
; APPLICANT: Fahy, Eoin D.
; APPLICANT: Zhang, Bing
; APPLICANT: Gibson, Bradford W.
; APPLICANT: Taylor, Steven W.
; APPLICANT: Glenn, Gary M.
; APPLICANT: Warnock, Dale E.
; TITLE OF INVENTION: TARGETS FOR THERAPEUTIC INTERVENTION
; TITLE OF INVENTION: IDENTIFIED IN THE MITOCHONDRIAL PROTEOME
; FILE REFERENCE: 660088.465
; CURRENT APPLICATION NUMBER: US/10/408,765A
; CURRENT FILING DATE: 2003-04-04
; NUMBER OF SEQ ID NOS: 3077
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 537
; LENGTH: 364
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-408-765A-537

Query Match 99.0%; Score 99; DB 4; Length 364;
Best Local Similarity 95.0%; Pred. No. 2.2e-07;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
|||||||:|||||
Db 345 PSGQAGAAASESLFVSNHAY 364

RESULT 6

US-10-370-715B-532
; Sequence 532, Application US/10370715B
; Publication No. US20040258678A1
; GENERAL INFORMATION:
; Patin Docket Preview
; APPLICANT: BODARY, SARAH C.
; APPLICANT: CLARK, HILLARY
; APPLICANT: BRISDELL, HUNTE
; APPLICANT: JACKMAN, JANET
; APPLICANT: SCHOENFELD, JILL R.
; APPLICANT: WILLIAMS, P. MICKEY
; APPLICANT: WOOD, WILLIAM I.
; APPLICANT: WU, THOMAS D.
; TITLE OF INVENTION: Compositions and Methods for the Treatment of Immune
; TITLE OF INVENTION: Related Diseases
; FILE REFERENCE: P1948R1-US
; CURRENT APPLICATION NUMBER: US/10/370,715B
; CURRENT FILING DATE: 2003-02-21
; NUMBER OF SEQ ID NOS: 742
; SEQ ID NO 532
; LENGTH: 364
; TYPE: PRT
; ORGANISM: Homo sapien
US-10-370-715B-532

Query Match 99.0%; Score 99; DB 5; Length 364;
Best Local Similarity 95.0%; Pred. No. 2.2e-07;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
|||||||:|||||
Db 345 PSGQAGAAASESLFVSNHAY 364

RESULT 7

US-10-205-219-67
 ; Sequence 67, Application US/10205219
 ; Publication No. US20030138803A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Warner-Lambert Company
 ; APPLICANT: Lee, Kevin
 ; APPLICANT: Dixon, Alistair
 ; APPLICANT: Brooksbank, Robert
 ; APPLICANT: Pinnock, Robert
 ; TITLE OF INVENTION: Identification and Use of Molecules Implicated in Pain
 ; FILE REFERENCE: WL-A-018200
 ; CURRENT APPLICATION NUMBER: US/10/205,219
 ; CURRENT FILING DATE: 2002-07-24
 ; PRIOR APPLICATION NUMBER: GB 0118354.0
 ; PRIOR FILING DATE: 2001-07-27
 ; NUMBER OF SEQ ID NOS: 197
 ; SOFTWARE: PatentIn Ver. 2.1
 ; SEQ ID NO 67
 ; LENGTH: 364
 ; TYPE: PRT
 ; ORGANISM: Rattus norvegicus
 ; FEATURE:
 ; OTHER INFORMATION: Aldolase A
 US-10-205-219-67

Query Match 97.0%; Score 97; DB 4; Length 364;
 Best Local Similarity 95.0%; Pred. No. 4.7e-07;
 Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
 ||||:|||||||
 Db 345 PSGQSGAAASESLFISNHAY 364

RESULT 8
 US-10-425-115-196160
 ; Sequence 196160, Application US/10425115
 ; Publication No. US20040214272A1
 ; GENERAL INFORMATION:
 ; APPLICANT: La Rosa, Thomas J.
 ; APPLICANT: Kovalic, David K.
 ; APPLICANT: Zhou, Yihua
 ; APPLICANT: Cao, Yongwei
 ; TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
 ; TITLE OF INVENTION: Plants
 ; FILE REFERENCE: 38-21(53222)B
 ; CURRENT APPLICATION NUMBER: US/10/425,115
 ; CURRENT FILING DATE: 2003-04-28
 ; NUMBER OF SEQ ID NOS: 369326
 ; SEQ ID NO 196160
 ; LENGTH: 112
 ; TYPE: PRT
 ; ORGANISM: Zea mays
 ; FEATURE:
 ; NAME/KEY: unsure
 ; LOCATION: (1)..(112)
 ; OTHER INFORMATION: unsure at all Xaa locations
 ; FEATURE:
 ; OTHER INFORMATION: Clone ID: MRT4577_110484C.1.pep
 US-10-425-115-196160

Query Match 96.0%; Score 96; DB 4; Length 112;
 Best Local Similarity 95.0%; Pred. No. 1.9e-07;
 Matches 19; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
 |||| |||||
 Db 93 PSGQXGAAASESLFISNHAY 112

RESULT 9
 US-09-925-301-1462
 ; Sequence 1462, Application US/09925301
 ; Patent No. US20020052308A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Rosen et al.

```

; TITLE OF INVENTION: Nucleic Acids, Proteins and Antibodies
; FILE REFERENCE: PA106
; CURRENT APPLICATION NUMBER: US/09/925,301
; CURRENT FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: PCT/US00/05882
; PRIOR FILING DATE: 2000-03-08
; PRIOR APPLICATION NUMBER: 60/124,270
; PRIOR FILING DATE: 1999-03-12
; NUMBER OF SEQ ID NOS: 1694
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1462
; LENGTH: 31
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: SITE
; LOCATION: (13)
; OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
US-09-925-301-1462

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Query Match          95.0%; Score 95; DB 3; Length 31;
Best Local Similarity 90.0%; Pred. No. 6.8e-08;
Matches 18; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

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Qy      1 PSQQAGAAASESLFISNHAY 20
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Db      12 PXGQAGAAASESLFVSNHAY 31

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RESULT 10

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US-10-878-556A-14
; Sequence 14, Application US/10878556A
; Publication No. US20050266399A1
; GENERAL INFORMATION:
; APPLICANT: Hoffmann La-Roche Inc.
; TITLE OF INVENTION: HCV regulated protein expression
; FILE REFERENCE: 21762
; CURRENT APPLICATION NUMBER: US/10/878,556A
; CURRENT FILING DATE: 2004-06-28
; NUMBER OF SEQ ID NOS: 199
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 14
; LENGTH: 363
; TYPE: PRT
; ORGANISM: Homo sapiens
; PUBLICATION INFORMATION:
; DATABASE ACCESSION NUMBER: sw_hum/alfc_human
; DATABASE ENTRY DATE: 1989-03-01
US-10-878-556A-14

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Query Match          68.0%; Score 68; DB 5; Length 363;
Best Local Similarity 63.2%; Pred. No. 0.023;
Matches 12; Conservative 5; Mismatches 2; Indels 0; Gaps 0;

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Qy      2 SGQAGAAASESLFISNHAY 20
        ||: | ||::||:|:||||
Db      345 SGEDGGAAQSLYIANHAY 363

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RESULT 11

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US-10-170-385-259
; Sequence 259, Application US/10170385
; Publication No. US20030203372A1
; GENERAL INFORMATION:
; APPLICANT: Ward, Neil Raymond
; APPLICANT: Mundy, Christopher Robert
; APPLICANT: Kan, On
; APPLICANT: Harris, Robert Alan
; APPLICANT: White, Jonathan
; APPLICANT: Binley, Katie Mary
; APPLICANT: Rayner, William Nigel
; APPLICANT: Naylor, Stuart
; APPLICANT: Kingsman, Susan Mary
; APPLICANT: Krige, David
; TITLE OF INVENTION: ANALYSIS METHOD
; FILE REFERENCE: 532682000100

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; CURRENT APPLICATION NUMBER: US/10/170,385
; CURRENT FILING DATE: 2002-06-12
; PRIOR APPLICATION NUMBER: PCT/GB02/01662
; PRIOR FILING DATE: 2002-04-08
; PRIOR APPLICATION NUMBER: PCT/GB01/05458
; PRIOR FILING DATE: 2001-12-10
; NUMBER OF SEQ ID NOS: 549
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 259
; LENGTH: 364
; TYPE: PRT
; ORGANISM: Homo Sapiens
US-10-170-385-259

Query Match 68.0%; Score 68; DB 4; Length 364;
Best Local Similarity 63.2%; Pred. No. 0.023;
Matches 12; Conservative 5; Mismatches 2; Indels 0; Gaps 0;

Qy 2 SGQAGAAASESLFISNHAY 20
||: | ||::||:|:||||
Db 346 SGEDGGAAQSLYIANHAY 364

RESULT 12

US-10-408-765A-98
; Sequence 98, Application US/10408765A
; Publication No. US20040101874A1
; GENERAL INFORMATION:
; APPLICANT: Ghosh, Soumitra S.
; APPLICANT: Fahy, Eoin D.
; APPLICANT: Zhang, Bing
; APPLICANT: Gibson, Bradford W.
; APPLICANT: Taylor, Steven W.
; APPLICANT: Glenn, Gary M.
; APPLICANT: Warnock, Dale E.
; TITLE OF INVENTION: TARGETS FOR THERAPEUTIC INTERVENTION
; TITLE OF INVENTION: IDENTIFIED IN THE MITOCHONDRIAL PROTEOME
; FILE REFERENCE: 660088.465
; CURRENT APPLICATION NUMBER: US/10/408,765A
; CURRENT FILING DATE: 2003-04-04
; NUMBER OF SEQ ID NOS: 3077
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 98
; LENGTH: 364
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-408-765A-98

Query Match 68.0%; Score 68; DB 4; Length 364;
Best Local Similarity 63.2%; Pred. No. 0.023;
Matches 12; Conservative 5; Mismatches 2; Indels 0; Gaps 0;

Qy 2 SGQAGAAASESLFISNHAY 20
||: | ||::||:|:||||
Db 346 SGEDGGAAQSLYIANHAY 364

RESULT 13

US-10-369-493-5923
; Sequence 5923, Application US/10369493
; Publication No. US20030233675A1
; GENERAL INFORMATION:
; APPLICANT: Cao, Yongwei
; APPLICANT: Hinkle, Gregory J.
; APPLICANT: Slater, Steven C.
; APPLICANT: Goldman, Barry S.
; APPLICANT: Chen, Xianfeng
; TITLE OF INVENTION: EXPRESSION OF MICROBIAL PROTEINS IN PLANTS FOR PRODUCTION OF
; TITLE OF INVENTION: PLANTS WITH IMPROVED PROPERTIES
; FILE REFERENCE: 38-10(52052)B
; CURRENT APPLICATION NUMBER: US/10/369,493
; CURRENT FILING DATE: 2003-02-28
; PRIOR APPLICATION NUMBER: US 60/360,039
; PRIOR FILING DATE: 2002-02-21
; NUMBER OF SEQ ID NOS: 47374
; SEQ ID NO 5923

; LENGTH: 365
; TYPE: PRT
; ORGANISM: Caenorhabditis elegans
US-10-369-493-5923

Query Match 61.0%; Score 61; DB 4; Length 365;
Best Local Similarity 68.8%; Pred. No. 0.31;
Matches 11; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Qy 5 AGAAASESLFISNHAY 20
| ||||:||||:|:
Db 350 ADAAASQSLFVANHSY 365

RESULT 14

US-10-108-605-255
; Sequence 255, Application US/10108605
; Publication No. US20020160934A1
; GENERAL INFORMATION:
; APPLICANT: Broadus, Julie
; APPLICANT: Stam, Lynn
; APPLICANT: Bachmann, Jane
; APPLICANT: Kamdar, Kim
; TITLE OF INVENTION: NUCLEIC ACID SEQUENCES FROM DROSOPHILA MELANOGASTER THAT ENCODE
; TITLE OF INVENTION: PROTEINS ESSENTIAL FOR LARVAL VIABILITY AND USES THEREOF
; FILE REFERENCE: 31133B
; CURRENT APPLICATION NUMBER: US/10/108,605
; CURRENT FILING DATE: 2002-03-27
; PRIOR APPLICATION NUMBER: US 09/761,142
; PRIOR FILING DATE: 2001-01-16
; PRIOR APPLICATION NUMBER: US 60/176,418
; PRIOR FILING DATE: 2000-01-14
; NUMBER OF SEQ ID NOS: 361
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 255
; LENGTH: 361
; TYPE: PRT
; ORGANISM: Drosophila melanogaster
US-10-108-605-255

Query Match 55.5%; Score 55.5; DB 4; Length 361;
Best Local Similarity 63.2%; Pred. No. 2.4;
Matches 12; Conservative 3; Mismatches 3; Indels 1; Gaps 1;

Qy 2 SGQAGAAASESLFISNHAY 20
:| || | | |||:||||
Db 344 AGSAG-AGSGSLFVANHAY 361

RESULT 15

US-11-097-143-27699
; Sequence 27699, Application US/11097143
; Publication No. US20050208558A1
; GENERAL INFORMATION:
; APPLICANT: Venter, J. Craig
; APPLICANT: et al.
; TITLE OF INVENTION: DETECTION KIT, SUCH AS NUCLEIC ACID
; TITLE OF INVENTION: ARRAYS, FOR DETECTING EXPRESSION OF 10,000 OR MORE
; TITLE OF INVENTION: DROSOPHILA GENES.
; FILE REFERENCE: CL000728
; CURRENT APPLICATION NUMBER: US/11/097,143
; CURRENT FILING DATE: 2005-04-04
; PRIOR APPLICATION NUMBER: 60/157,832
; PRIOR FILING DATE: 1999-10-05
; PRIOR APPLICATION NUMBER: 60/160,191
; PRIOR FILING DATE: 1999-10-19
; PRIOR APPLICATION NUMBER: 60/161,932
; PRIOR FILING DATE: 1999-10-28
; PRIOR APPLICATION NUMBER: 60/164,769
; PRIOR FILING DATE: 1999-11-12
; PRIOR APPLICATION NUMBER: 60/173,383
; PRIOR FILING DATE: 1999-12-28
; PRIOR APPLICATION NUMBER: 60/175,693
; PRIOR FILING DATE: 2000-01-12
; PRIOR APPLICATION NUMBER: 60/184,831
; PRIOR FILING DATE: 2000-02-24

; PRIOR APPLICATION NUMBER: 60/191,637
; PRIOR FILING DATE: 2000-03-23
; NUMBER OF SEQ ID NOS: 43008
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 27699
; LENGTH: 361
; TYPE: PRT
; ORGANISM: DROSOPHILA
US-11-097-143-27699

Query Match 55.5%; Score 55.5; DB 6; Length 361;
Best Local Similarity 63.2%; Pred. No. 2.4;
Matches 12; Conservative 3; Mismatches 3; Indels 1; Gaps 1;

Qy 2 SGQAGAAASESLFISNHAY 20
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Db 344 AGSAG-AGSGSLFVANHAY 361

Search completed: July 20, 2006, 09:43:16
Job time : 7.49446 secs

SCORE 1.3 BuildDate: 12/06/2005

SCORE Search Results Details for Application 10717243 and Search Result us-10-717-243-57.rapbn.

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OM protein - protein search, using sw model

Run on: July 20, 2006, 09:40:39 ; Search time 1.18081 Seconds
(without alignments)
976.754 Million cell updates/sec

Title: US-10-717-243-57
Perfect score: 100
Sequence: 1 PSGQAGAAASESLFISNHAY 20

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 208217 seqs, 57668156 residues

Total number of hits satisfying chosen parameters: 208217

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_AA_New:*
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3: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US07_NEW_PUB.pep:*
4: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US08_NEW_PUB.pep:*
5: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*
6: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
7: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US11_NEW_PUB.pep:*
8: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US60_NEW_PUB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	% Query		Match	Length	DB	ID	Description
	Score	Match					
1	50.5	50.5	836	6	US-10-509-131-35	Sequence 35, Appl	
2	50.5	50.5	836	7	US-11-293-697-3700	Sequence 3700, Ap	
3	44.5	44.5	358	6	US-10-449-902-28573	Sequence 28573, A	
4	44.5	44.5	358	6	US-10-449-902-28595	Sequence 28595, A	
5	44.5	44.5	358	6	US-10-449-902-31655	Sequence 31655, A	
6	44.5	44.5	358	6	US-10-449-902-42837	Sequence 42837, A	
7	44.5	44.5	358	6	US-10-449-902-53273	Sequence 53273, A	
8	43	43.0	443	7	US-11-283-329-128	Sequence 128, App	
9	43	43.0	520	6	US-10-449-902-51930	Sequence 51930, A	

10	43	43.0	626	7	US-11-283-329-124	Sequence 124, App
11	43	43.0	626	7	US-11-283-329-126	Sequence 126, App
12	43	43.0	637	7	US-11-283-329-130	Sequence 130, App
13	43	43.0	845	7	US-11-056-355B-75212	Sequence 75212, A
14	43	43.0	854	7	US-11-056-355B-45071	Sequence 45071, A
15	43	43.0	854	7	US-11-056-355B-47878	Sequence 47878, A
16	43	43.0	854	7	US-11-056-355B-75211	Sequence 75211, A
17	43	43.0	864	7	US-11-056-355B-45070	Sequence 45070, A
18	43	43.0	864	7	US-11-056-355B-47877	Sequence 47877, A
19	43	43.0	864	7	US-11-056-355B-75210	Sequence 75210, A
20	43	43.0	886	7	US-11-056-355B-45069	Sequence 45069, A
21	43	43.0	886	7	US-11-056-355B-47876	Sequence 47876, A
22	42	42.0	159	7	US-11-056-355B-51219	Sequence 51219, A
23	42	42.0	187	7	US-11-056-355B-51218	Sequence 51218, A
24	42	42.0	271	6	US-10-449-902-33243	Sequence 33243, A
25	42	42.0	307	6	US-10-449-902-44340	Sequence 44340, A
26	42	42.0	674	6	US-10-449-902-43418	Sequence 43418, A
27	41	41.0	1010	7	US-11-056-355B-86864	Sequence 86864, A
28	41	41.0	1035	7	US-11-056-355B-86863	Sequence 86863, A
29	41	41.0	1045	7	US-11-056-355B-73120	Sequence 73120, A
30	40	40.0	128	6	US-10-953-349-3099	Sequence 3099, Ap
31	40	40.0	128	7	US-11-056-355B-28419	Sequence 28419, A
32	40	40.0	128	7	US-11-056-355B-32009	Sequence 32009, A
33	40	40.0	128	7	US-11-056-355B-104705	Sequence 104705,
34	40	40.0	128	7	US-11-056-355B-115944	Sequence 115944,
35	40	40.0	148	6	US-10-953-349-3098	Sequence 3098, Ap
36	40	40.0	148	7	US-11-056-355B-28418	Sequence 28418, A
37	40	40.0	148	7	US-11-056-355B-32008	Sequence 32008, A
38	40	40.0	148	7	US-11-056-355B-104704	Sequence 104704,
39	40	40.0	148	7	US-11-056-355B-115943	Sequence 115943,
40	40	40.0	221	6	US-10-449-902-46304	Sequence 46304, A
41	40	40.0	279	6	US-10-449-902-37961	Sequence 37961, A
42	40	40.0	284	6	US-10-449-902-41709	Sequence 41709, A
43	40	40.0	291	6	US-10-539-868-22	Sequence 22, Appl
44	40	40.0	305	7	US-11-293-697-3972	Sequence 3972, Ap
45	40	40.0	391	7	US-11-056-355B-67785	Sequence 67785, A

ALIGNMENTS

RESULT 1

US-10-509-131-35

; Sequence 35, Application US/10509131

; Publication No. US20060089493A1

; GENERAL INFORMATION:

; APPLICANT: Biogen Idec Inc.

; APPLICANT: McLachlan, Karen

; APPLICANT: Gately, Dennis

; TITLE OF INVENTION: NOVEL GENE TARGETS AND LIGANDS THAT BIND THERETO FOR TREATMENT AND

; TITLE OF INVENTION: DIAGNOSIS OF COLON CARCINOMAS

; FILE REFERENCE: 037003-0302886

; CURRENT APPLICATION NUMBER: US/10/509,131

; CURRENT FILING DATE: 2004-09-28

; PRIOR APPLICATION NUMBER: US 60/367,727

; PRIOR FILING DATE: 2002-03-28

; PRIOR APPLICATION NUMBER: US 60/381,328

; PRIOR FILING DATE: 2002-05-20

; PRIOR APPLICATION NUMBER: US 60/386,747

; PRIOR FILING DATE: 2002-06-10

; PRIOR APPLICATION NUMBER: US 60/427,564

; PRIOR FILING DATE: 2002-11-20

; NUMBER OF SEQ ID NOS: 67

; SOFTWARE: PatentIn version 3.1

; SEQ ID NO 35

; LENGTH: 836

; TYPE: PRT

; ORGANISM: Homo sapiens

US-10-509-131-35

Query Match 50.5%; Score 50.5; DB 6; Length 836;

Best Local Similarity 52.4%; Pred. No. 3.4;

Matches 11; Conservative 3; Mismatches 6; Indels 1; Gaps 1;

Qy 1 PSG-QAGAAASESLFISNHAY 20

| : | | | | | : | : | |

Db 620 PAGPSAGAAGSSTLFLGPHLY 640

RESULT 2

US-11-293-697-3700
; Sequence 3700, Application US/11293697
; Publication No. US20060105376A1
; GENERAL INFORMATION:
; APPLICANT: HELIX RESEARCH INSTITUTE
; TITLE OF INVENTION: Novel full length cDNA
; FILE REFERENCE: H1-A0106
; CURRENT APPLICATION NUMBER: US/11/293,697
; CURRENT FILING DATE: 2005-12-05
; PRIOR APPLICATION NUMBER: US/10/108,260
; PRIOR FILING DATE: 2002-03-28
; NUMBER OF SEQ ID NOS: 5458
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3700
; LENGTH: 836
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-293-697-3700

Query Match 50.5%; Score 50.5; DB 7; Length 836;
Best Local Similarity 52.4%; Pred. No. 3.4;
Matches 11; Conservative 3; Mismatches 6; Indels 1; Gaps 1;

Qy 1 PSG-QAGAAASESLFISNHAY 20
|:| |||| | :||: | |
Db 620 PAGPSAGAAGSSTLFLGPHLY 640

RESULT 3

US-10-449-902-28573
; Sequence 28573, Application US/10449902
; Publication No. US20060123505A1
; GENERAL INFORMATION:
; APPLICANT: National Institute of Agrobiological Sciences.
; APPLICANT: Bio-oriented Technology Research Advancement Institution.
; APPLICANT: The Institute of Physical and Chemical Research.
; APPLICANT: Foundation for Advancement of International Science.
; TITLE OF INVENTION: FULL-LENGTH PLANT cDNA AND USES THEREOF
; FILE REFERENCE: MOA-A0205Y1-US
; CURRENT APPLICATION NUMBER: US/10/449,902
; CURRENT FILING DATE: 2003-05-29
; PRIOR APPLICATION NUMBER: JP 2002-203269
; PRIOR FILING DATE: 2002-05-30
; PRIOR APPLICATION NUMBER: JP 2002-383870
; PRIOR FILING DATE: 2002-12-11
; NUMBER OF SEQ ID NOS: 56791
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 28573
; LENGTH: 358
; TYPE: PRT
; ORGANISM: Oryza sativa
US-10-449-902-28573

Query Match 44.5%; Score 44.5; DB 6; Length 358;
Best Local Similarity 52.6%; Pred. No. 13;
Matches 10; Conservative 3; Mismatches 5; Indels 1; Gaps 1;

Qy 3 GQAG-AAASESLFISNHAY 20
| || || ||||: : |
Db 340 GAAGDAATSESLYVKGTY 358

RESULT 4

US-10-449-902-28595
; Sequence 28595, Application US/10449902
; Publication No. US20060123505A1
; GENERAL INFORMATION:
; APPLICANT: National Institute of Agrobiological Sciences.
; APPLICANT: Bio-oriented Technology Research Advancement Institution.
; APPLICANT: The Institute of Physical and Chemical Research.
; APPLICANT: Foundation for Advancement of International Science.
; TITLE OF INVENTION: FULL-LENGTH PLANT cDNA AND USES THEREOF

; FILE REFERENCE: MOA-A0205Y1-US
; CURRENT APPLICATION NUMBER: US/10/449,902
; CURRENT FILING DATE: 2003-05-29
; PRIOR APPLICATION NUMBER: JP 2002-203269
; PRIOR FILING DATE: 2002-05-30
; PRIOR APPLICATION NUMBER: JP 2002-383870
; PRIOR FILING DATE: 2002-12-11
; NUMBER OF SEQ ID NOS: 56791
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 28595
; LENGTH: 358
; TYPE: PRT
; ORGANISM: Oryza sativa
US-10-449-902-28595

Query Match 44.5%; Score 44.5; DB 6; Length 358;
Best Local Similarity 52.6%; Pred. No. 13;
Matches 10; Conservative 3; Mismatches 5; Indels 1; Gaps 1;

Qy 3 GQAG-AAASESLFISNHAY 20
| || || ||||: : |
Db 340 GAAGDAATSES LYVKGYTY 358

RESULT 5

US-10-449-902-31655
; Sequence 31655, Application US/10449902
; Publication No. US20060123505A1
; GENERAL INFORMATION:
; APPLICANT: National Institute of Agrobiological Sciences.
; APPLICANT: Bio-oriented Technology Research Advancement Institution.
; APPLICANT: The Institute of Physical and Chemical Research.
; APPLICANT: Foundation for Advancement of International Science.
; TITLE OF INVENTION: FULL-LENGTH PLANT cDNA AND USES THEREOF
; FILE REFERENCE: MOA-A0205Y1-US
; CURRENT APPLICATION NUMBER: US/10/449,902
; CURRENT FILING DATE: 2003-05-29
; PRIOR APPLICATION NUMBER: JP 2002-203269
; PRIOR FILING DATE: 2002-05-30
; PRIOR APPLICATION NUMBER: JP 2002-383870
; PRIOR FILING DATE: 2002-12-11
; NUMBER OF SEQ ID NOS: 56791
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 31655
; LENGTH: 358
; TYPE: PRT
; ORGANISM: Oryza sativa
US-10-449-902-31655

Query Match 44.5%; Score 44.5; DB 6; Length 358;
Best Local Similarity 52.6%; Pred. No. 13;
Matches 10; Conservative 3; Mismatches 5; Indels 1; Gaps 1;

Qy 3 GQAG-AAASESLFISNHAY 20
| || || ||||: : |
Db 340 GAAGDAATSES LYVKGYTY 358

RESULT 6

US-10-449-902-42837
; Sequence 42837, Application US/10449902
; Publication No. US20060123505A1
; GENERAL INFORMATION:
; APPLICANT: National Institute of Agrobiological Sciences.
; APPLICANT: Bio-oriented Technology Research Advancement Institution.
; APPLICANT: The Institute of Physical and Chemical Research.
; APPLICANT: Foundation for Advancement of International Science.
; TITLE OF INVENTION: FULL-LENGTH PLANT cDNA AND USES THEREOF
; FILE REFERENCE: MOA-A0205Y1-US
; CURRENT APPLICATION NUMBER: US/10/449,902
; CURRENT FILING DATE: 2003-05-29
; PRIOR APPLICATION NUMBER: JP 2002-203269
; PRIOR FILING DATE: 2002-05-30
; PRIOR APPLICATION NUMBER: JP 2002-383870
; PRIOR FILING DATE: 2002-12-11
; NUMBER OF SEQ ID NOS: 56791

; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 42837
; LENGTH: 358
; TYPE: PRT
; ORGANISM: Oryza sativa
US-10-449-902-42837

Query Match 44.5%; Score 44.5; DB 6; Length 358;
Best Local Similarity 52.6%; Pred. No. 13;
Matches 10; Conservative 3; Mismatches 5; Indels 1; Gaps 1;

Qy 3 GQAG-AAASESLFISNHAY 20
| || || ||||:: : |
Db 340 GAAGDAATSESLYVKGYTY 358

RESULT 7

US-10-449-902-53273
; Sequence 53273, Application US/10449902
; Publication No. US20060123505A1
; GENERAL INFORMATION:
; APPLICANT: National Institute of Agrobiological Sciences.
; APPLICANT: Bio-oriented Technology Research Advancement Institution.
; APPLICANT: The Institute of Physical and Chemical Research.
; APPLICANT: Foundation for Advancement of International Science.
; TITLE OF INVENTION: FULL-LENGTH PLANT cDNA AND USES THEREOF
; FILE REFERENCE: MOA-A0205Y1-US
; CURRENT APPLICATION NUMBER: US/10/449,902
; CURRENT FILING DATE: 2003-05-29
; PRIOR APPLICATION NUMBER: JP 2002-203269
; PRIOR FILING DATE: 2002-05-30
; PRIOR APPLICATION NUMBER: JP 2002-383870
; PRIOR FILING DATE: 2002-12-11
; NUMBER OF SEQ ID NOS: 56791
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 53273
; LENGTH: 358
; TYPE: PRT
; ORGANISM: Oryza sativa
US-10-449-902-53273

Query Match 44.5%; Score 44.5; DB 6; Length 358;
Best Local Similarity 52.6%; Pred. No. 13;
Matches 10; Conservative 3; Mismatches 5; Indels 1; Gaps 1;

Qy 3 GQAG-AAASESLFISNHAY 20
| || || ||||:: : |
Db 340 GAAGDAATSESLYVKGYTY 358

RESULT 8

US-11-283-329-128
; Sequence 128, Application US/11283329
; Publication No. US20060134670A1
; GENERAL INFORMATION:
; APPLICANT: Piu, Fabrice
; TITLE OF INVENTION: ENABLING TOOLS TO IDENTIFY LIGANDS FOR
; TITLE OF INVENTION: HORMONE NUCLEAR RECEPTORS
; FILE REFERENCE: ACADIA.043A
; CURRENT APPLICATION NUMBER: US/11/283,329
; CURRENT FILING DATE: 2005-11-18
; PRIOR APPLICATION NUMBER: 60/629,811
; PRIOR FILING DATE: 2004-11-19
; NUMBER OF SEQ ID NOS: 242
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 128
; LENGTH: 443
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-283-329-128

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Best Local Similarity 40.0%; Pred. No. 29;
Matches 8; Conservative 4; Mismatches 8; Indels 0; Gaps 0;

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; FILE REFERENCE: ACADIA.043A
; CURRENT APPLICATION NUMBER: US/11/283,329
; CURRENT FILING DATE: 2005-11-18
; PRIOR APPLICATION NUMBER: 60/629,811
; PRIOR FILING DATE: 2004-11-19
; NUMBER OF SEQ ID NOS: 242
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 126
; LENGTH: 626
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-283-329-126
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Best Local Similarity 40.0%; Pred. No. 42;
Matches      8; Conservative 4; Mismatches      8; Indels      0; Gaps      0;
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Qy      1 PSGQAGAAASESLFISNHAY 20
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Db      224 PLGAAAAAGSQAAALESHPY 243
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RESULT 12

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US-11-283-329-130
; Sequence 130, Application US/11283329
; Publication No. US20060134670A1
; GENERAL INFORMATION:
; APPLICANT: Piu, Fabrice
; TITLE OF INVENTION: ENABLING TOOLS TO IDENTIFY LIGANDS FOR
; TITLE OF INVENTION: HORMONE NUCLEAR RECEPTORS
; FILE REFERENCE: ACADIA.043A
; CURRENT APPLICATION NUMBER: US/11/283,329
; CURRENT FILING DATE: 2005-11-18
; PRIOR APPLICATION NUMBER: 60/629,811
; PRIOR FILING DATE: 2004-11-19
; NUMBER OF SEQ ID NOS: 242
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 130
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-283-329-130
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Query Match          43.0%; Score 43; DB 7; Length 637;
Best Local Similarity 40.0%; Pred. No. 43;
Matches      8; Conservative 4; Mismatches      8; Indels      0; Gaps      0;
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Qy      1 PSGQAGAAASESLFISNHAY 20
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Db      235 PLGAAAAAGSQAAALESHPY 254
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RESULT 13

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US-11-056-355B-75212
; Sequence 75212, Application US/11056355B
; Publication No. US20060150283A1
; GENERAL INFORMATION:
; APPLICANT: Brover, Vyacheslav
; APPLICANT: Alexandrov, Nickolai
; TITLE OF INVENTION: Sequence Determined DNA Fragments and Corresponding
; TITLE OF INVENTION: Polypeptides Encoded Thereby
; FILE REFERENCE: 2750-1590PUS2
; CURRENT APPLICATION NUMBER: US/11/056,355B
; CURRENT FILING DATE: 2005-02-14
; PRIOR APPLICATION NUMBER: 60/544,190
; PRIOR FILING DATE: 2004-02-13
; NUMBER OF SEQ ID NOS: 119966
; SEQ ID NO 75212
; LENGTH: 845
; TYPE: prt
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: peptide
; LOCATION: (1)..(845)
; OTHER INFORMATION: Ceres Seq. ID no. 6431512
US-11-056-355B-75212
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Query Match 43.0%; Score 43; DB 7; Length 845;
Best Local Similarity 30.6%; Pred. No. 59;
Matches 11; Conservative 3; Mismatches 6; Indels 16; Gaps 1;

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Db 108 PDGEGGATAIHFICNSWIYPNHRYSRDRVFFSNKAY 143

RESULT 14

US-11-056-355B-45071
; Sequence 45071, Application US/11056355B
; Publication No. US20060150283A1
; GENERAL INFORMATION:
; APPLICANT: Brover, Vyacheslav
; APPLICANT: Alexandrov, Nickolai
; TITLE OF INVENTION: Sequence Determined DNA Fragments and Corresponding
; TITLE OF INVENTION: Polypeptides Encoded Thereby
; FILE REFERENCE: 2750-1590PUS2
; CURRENT APPLICATION NUMBER: US/11/056,355B
; CURRENT FILING DATE: 2005-02-14
; PRIOR APPLICATION NUMBER: 60/544,190
; PRIOR FILING DATE: 2004-02-13
; NUMBER OF SEQ ID NOS: 119966
; SEQ ID NO 45071
; LENGTH: 854
; TYPE: prt
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: peptide
; LOCATION: (1)..(854)
; OTHER INFORMATION: Ceres Seq. ID no. 12600173
US-11-056-355B-45071

Query Match 43.0%; Score 43; DB 7; Length 854;
Best Local Similarity 30.6%; Pred. No. 59;
Matches 11; Conservative 3; Mismatches 6; Indels 16; Gaps 1;

Qy 1 PSGQAGAAA-----SESLFISNHAY 20
| |: || | | : | || ||
Db 117 PDGEGGATAIHFICNSWIYPNHRYSRDRVFFSNKAY 152

RESULT 15

US-11-056-355B-47878
; Sequence 47878, Application US/11056355B
; Publication No. US20060150283A1
; GENERAL INFORMATION:
; APPLICANT: Brover, Vyacheslav
; APPLICANT: Alexandrov, Nickolai
; TITLE OF INVENTION: Sequence Determined DNA Fragments and Corresponding
; TITLE OF INVENTION: Polypeptides Encoded Thereby
; FILE REFERENCE: 2750-1590PUS2
; CURRENT APPLICATION NUMBER: US/11/056,355B
; CURRENT FILING DATE: 2005-02-14
; PRIOR APPLICATION NUMBER: 60/544,190
; PRIOR FILING DATE: 2004-02-13
; NUMBER OF SEQ ID NOS: 119966
; SEQ ID NO 47878
; LENGTH: 854
; TYPE: prt
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: peptide
; LOCATION: (1)..(854)
; OTHER INFORMATION: Ceres Seq. ID no. 12600173
US-11-056-355B-47878

Query Match 43.0%; Score 43; DB 7; Length 854;
Best Local Similarity 30.6%; Pred. No. 59;
Matches 11; Conservative 3; Mismatches 6; Indels 16; Gaps 1;

Qy 1 PSGQAGAAA-----SESLFISNHAY 20
| |: || | | : | || ||
Db 117 PDGEGGATAIHFICNSWIYPNHRYSRDRVFFSNKAY 152

Search completed: July 20, 2006, 09:41:18
Job time : 1.18081 secs

SCORE 1.3 BuildDate: 12/06/2005

SCORE Search Results Details for Application 10717243-243-57.rpr.

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This page gives you Search Results detail for the Application 10717243 and Search Result [us-10-71 start](#)

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OM protein - protein search, using sw model

Run on: July 20, 2006, 09:36:32 ; Search time 1.51292 Seconds
(without alignments)
1271.939 Million cell updates/sec

Title: US-10-717-243-57
Perfect score: 100
Sequence: 1 PSQGAGAAASESLFISNHAY 20

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR_80:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query		DB	ID	Description
		Match	Length			
1	100	100.0	363	1	ADRBA	fructose-bisphosph
2	99	99.0	364	1	ADHUA	fructose-bisphosph
3	97	97.0	364	1	ADMSA	fructose-bisphosph
4	97	97.0	364	1	ADRTA	fructose-bisphosph
5	95	95.0	42	2	I51291	aldolase C - chick
6	77	77.0	364	2	JC4189	fructose-bisphosph
7	69.5	69.5	363	2	JC4188	fructose-bisphosph
8	68	68.0	364	1	ADHUC	fructose-bisphosph
9	61	61.0	365	2	T24514	hypothetical prote
10	60.5	60.5	363	2	I53145	zebrin II - mouse
11	59.5	59.5	363	1	ADRTC	fructose-bisphosph
12	58	58.0	137	2	I51292	aldolase A - chick
13	57	57.0	364	2	S45346	fructose-bisphosph
14	55.5	55.5	361	1	ADFF	fructose-bisphosph
15	55.5	55.5	361	2	C42263	fructose 1,6-bisph
16	52	52.0	366	2	T15951	hypothetical prote
17	50	50.0	364	1	ADRTB	fructose-bisphosph
18	48	48.0	179	2	AF0981	probable exported

19	48	48.0	1772	2	A45532	major merozoite su
20	47	47.0	364	2	S48810	fructose-bisphosph
21	46	46.0	170	2	D95178	conserved domain p
22	46	46.0	170	2	C98045	hypothetical prote
23	46	46.0	293	2	AE1950	cytosine-specific
24	46	46.0	364	1	ADHUB	fructose-bisphosph
25	46	46.0	644	2	T46277	hypothetical prote
26	45	45.0	357	1	ADSPAC	fructose-bisphosph
27	45	45.0	357	2	T12416	fructose-bisphosph
28	45	45.0	364	1	ADCHB	fructose-bisphosph
29	44	44.0	627	2	T02846	dynein light chain
30	44	44.0	1005	2	S73711	probable lipoprote
31	44	44.0	1054	2	T43226	translation initia
32	43	43.0	310	2	B97777	thioredoxin-disulf
33	42	42.0	259	2	T13260	hypothetical prote
34	42	42.0	259	2	D86685	prophage p11 prote
35	42	42.0	259	2	C86797	prophage p13 prote
36	42	42.0	259	2	C86757	prophage p12 prote
37	42	42.0	307	2	G70665	hypothetical prote
38	42	42.0	310	2	D71703	thioredoxin reduct
39	42	42.0	359	2	S58167	fructose-bisphosph
40	42	42.0	430	2	S66671	neuron-derived rec
41	42	42.0	489	2	F82085	glutamate synthase
42	42	42.0	625	2	S71930	neuron-derived rec
43	42	42.0	628	2	JC2493	neuron derived orp
44	41	41.0	209	2	D64212	D-ribulose-5-phosp
45	41	41.0	242	2	A82512	hypothetical prote

ALIGNMENTS

RESULT 1

ADRBA

fructose-bisphosphate aldolase (EC 4.1.2.13) A - rabbit

N;Alternate names: aldolase A; fructose-1,6-bisphosphate triosephosphate-lyase A

C;Species: Oryctolagus cuniculus (domestic rabbit)

C;Date: 24-Apr-1984 #sequence_revision 27-Nov-1985 #text_change 09-Jul-2004

C;Accession: A92444; A90059; A90305; A90060; I46474; I46475; A01103

R;Tolan, D.R.; Amsden, A.B.; Putney, S.D.; Urdea, M.S.; Penhoet, E.E.

J. Biol. Chem. 259, 1127-1131, 1984

A;Title: The complete nucleotide sequence for rabbit muscle aldolase A messenger RNA.

A;Reference number: A92444; MUID:84111505; PMID:6546378

A;Accession: A92444

A;Molecule type: mRNA

A;Residues: 1-363

A;Cross-references: UNIPROT:P00883; UNIPARC:UPI0000125800; GB:K02300; NID:g164751; PIDN:AAA31156.1; PID:g16

A;Note: initiator Met not shown

R;Lai, C.Y.; Nakai, N.; Chang, D.

Science 183, 1204-1206, 1974

A;Title: Amino acid sequence of rabbit muscle aldolase and the structure of the active center.

A;Reference number: A94244; MUID:74094688; PMID:4812352

A;Contents: annotation

A;Note: the sequence reported in this paper has been revised in references A90305 and A90060

R;Nakai, N.; Chang, D.; Lai, C.Y.

Arch. Biochem. Biophys. 166, 347-357, 1975

A;Title: Studies on the structure of rabbit muscle aldolase. Ordering of the tryptic peptides; sequence of

A;Reference number: A90059; MUID:75145171; PMID:1122141

A;Accession: A90059

A;Molecule type: protein

A;Residues: 1-33,'Q',35-164

A;Cross-references: UNIPARC:UPI0000172F31

R;Benfield, P.A.; Forcina, B.G.; Gibbons, I.; Perham, R.N.

Biochem. J. 183, 429-444, 1979

A;Title: Extended amino acid sequences around the active-site lysine residue of class-I fructose 1,6-bispho

A;Reference number: A90305; MUID:80109133; PMID:534504

A;Accession: A90305

A;Molecule type: protein

A;Residues: 173-200

A;Cross-references: UNIPARC:UPI0000172F32

R;Lai, C.Y.

Arch. Biochem. Biophys. 166, 358-368, 1975

A;Title: Studies on the structure of rabbit muscle aldolase. Determination of the primary structure of the

A;Reference number: A90060; MUID:75145172; PMID:1122142

A;Accession: A90060

A;Molecule type: protein

A;Residues: 251-272,'S',274,'E',276-277,'G',279-292,'W',294,'K',296-363
A;Cross-references: UNIPARC:UPI0000172F33
R;Hartman, F.C.; Brown, J.P.
J. Biol. Chem. 251, 3057-3062, 1976
A;Title: Affinity labeling of a previously undetected essential lysyl residue in class I fructose biphosph
A;Reference number: A92191; MUID:76190154; PMID:5453
A;Contents: annotation; active site
R;Putney, S.D.; Herlihy, W.C.; Schimmel, P.
Nature 302, 718-721, 1983
A;Title: A new troponin T and cDNA clones for 13 different muscle proteins, found by shotgun sequencing.
A;Reference number: I46471; MUID:83167564; PMID:6687628
A;Accession: I46474
A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 37-55
A;Cross-references: UNIPARC:UPI000016C530; EMBL:V00876; NID:g1444; PIDN:CAA24245.1; PID:g929753
A;Accession: I46475
A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 349-352,'R',354-363
A;Cross-references: UNIPARC:UPI000016C531; EMBL:V00877; NID:g1446; PIDN:CAA24246.1; PID:g833792
C;Comment: In vertebrates, three forms of this ubiquitous glycolytic enzyme are found, aldolase A in muscle
C;Superfamily: fructose-bisphosphate aldolase
C;Keywords: aldehyde-lyase; carbon-carbon lyase; gluconeogenesis; glycolysis; muscle; pentose phosphate pat
F;2-363/Product: fructose-bisphosphate aldolase A #status predicted
F;146,229,363/Active site: Lys, Lys, Tyr #status predicted

Query Match 100.0%; Score 100; DB 1; Length 363;
Best Local Similarity 100.0%; Pred. No. 1.7e-08;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
|||||
Db 344 PSGQAGAAASESLFISNHAY 363

RESULT 2

ADHUA

fructose-bisphosphate aldolase (EC 4.1.2.13) A [validated] - human
N;Alternate names: aldolase A; fructose-1,6-bisphosphate triosephosphate-lyase A
C;Species: Homo sapiens (man)
C;Date: 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change 09-Jul-2004
C;Accession: S14084; A27186; S01014; S00290; S02338; A05177; S03874; S23919; I39429; I39435
R;Mukai, T.; Arai, Y.; Yatsuki, H.; Joh, K.; Hori, K.
Eur. J. Biochem. 195, 781-787, 1991
A;Title: An additional promoter functions in the human aldolase A gene, but not in rat.
A;Reference number: S14084; MUID:91153319; PMID:1999195
A;Accession: S14084
A;Molecule type: DNA
A;Residues: 1-364
A;Cross-references: UNIPROT:P04075; UNIPARC:UPI0000000C5D
R;Izzo, P.; Costanzo, P.; Lupo, A.; Rippa, E.; Borghese, A.M.; Paoletta, G.; Salvatore, F.
Eur. J. Biochem. 164, 9-13, 1987
A;Title: A new human species of aldolase A mRNA from fibroblasts.
A;Reference number: A27186; MUID:87161904; PMID:3030757
A;Accession: A27186
A;Molecule type: mRNA
A;Residues: 1-364
A;Cross-references: UNIPARC:UPI0000000C5D; GB:X05236; NID:g28596; PIDN:CAA28861.1; PID:g28597
A;Experimental source: fibroblast
R;Izzo, P.; Costanzo, P.; Lupo, A.; Rippa, E.; Paoletta, G.; Salvatore, F.
Eur. J. Biochem. 174, 569-578, 1988
A;Title: Human aldolase A gene. Structural organization and tissue-specific expression by multiple promoter
A;Reference number: S01014; MUID:88271327; PMID:3391172
A;Accession: S01014
A;Molecule type: DNA
A;Residues: 1-72,'G',74-195,'A',197-229,'N',231-279,'S',281-364
A;Cross-references: UNIPARC:UPI000016A52D; GB:X12447; NID:g28613; PIDN:CAA30979.1; PID:g28614
R;Freemont, P.S.; Dunbar, B.; Fothergill-Gilmore, L.A.
Biochem. J. 249, 779-788, 1988
A;Title: The complete amino acid sequence of human skeletal-muscle fructose-bisphosphate aldolase.
A;Reference number: S00290; MUID:88183272; PMID:3355497
A;Accession: S00290
A;Molecule type: protein
A;Residues: 2-358,'I',360-364
A;Cross-references: UNIPARC:UPI0000172F2C

R;Maire, P.; Gautron, S.; Hakim, V.; Gregori, C.; Menecier, F.; Kahn, A.
 J. Mol. Biol. 197, 425-438, 1987
 A;Title: Characterization of three optional promoters in the 5' region of the human aldolase A gene.
 A;Reference number: S02338; MUID:88155643; PMID:3441006
 A;Accession: S02338
 A;Molecule type: DNA
 A;Residues: 1-108
 A;Cross-references: UNIPARC:UPI000016A521; EMBL:X06352; NID:g28594; PIDN:CAA29654.1; PID:g28595
 R;Freemont, P.S.; Dunbar, B.; Fothergill, L.A.
 Arch. Biochem. Biophys. 228, 342-352, 1984
 A;Title: Human skeletal-muscle aldolase: N-terminal sequence analysis of CNBr- and o-iodosobenzoic acid-cle
 A;Reference number: A05177; MUID:84126818; PMID:6696436
 A;Accession: A05177
 A;Molecule type: protein
 A;Residues: 2-63;148-358
 A;Cross-references: UNIPARC:UPI0000172F2D; UNIPARC:UPI0000172F2E
 R;Sakakibara, M.; Takahashi, I.; Takasaki, Y.; Mukai, T.; Hori, K.
 Biochim. Biophys. Acta 1007, 334-342, 1989
 A;Title: Construction and expression of human aldolase A and B expression plasmids in Escherichia coli host
 A;Reference number: S03874; MUID:89194215; PMID:2649152
 A;Accession: S03874
 A;Molecule type: mRNA
 A;Residues: 1-33;357-364
 A;Cross-references: UNIPARC:UPI0000172F2F; UNIPARC:UPI0000172F30
 R;Lee, K.N.; Maxwell, M.D.; Patterson Jr., M.K.; Birckbichler, P.J.; Conway, E.
 Biochim. Biophys. Acta 1136, 12-16, 1992
 A;Title: Identification of transglutaminase substrates in HT29 colon cancer cells: use of 5-(biotinamido) p
 A;Reference number: S23919; MUID:92353128; PMID:1353685
 A;Accession: S23919
 A;Molecule type: protein
 A;Residues: 2-16
 A;Cross-references: UNIPARC:UPI0000071F95
 R;Gambelin, S.J.; Davies, G.J.; Grimes, J.M.; Jackson, R.M.; Littlechild, J.A.; Watson, H.C.
 J. Mol. Biol. 219, 573-576, 1991
 A;Title: Activity and Specificity of Human Aldolases.
 A;Reference number: A43787; MUID:91278081; PMID:2056525
 A;Contents: annotation; active site
 R;Sakakibara, M.; Mukai, T.; Hori, K.
 Biochem. Biophys. Res. Commun. 131, 413-420, 1985
 A;Title: Nucleotide sequence of a cDNA clone for human aldolase: a messenger RNA in the liver.
 A;Reference number: I39429; MUID:85306986; PMID:3840020
 A;Accession: I39429
 A;Status: translated from GB/EMBL/DDBJ
 A;Molecule type: mRNA
 A;Residues: 1-364
 A;Cross-references: UNIPARC:UPI0000000C5D; GB:M11560; NID:g178350; PIDN:AAA51690.1; PID:g178351
 R;Tolan, D.R.; Niclas, J.; Bruce, B.D.; Lebo, R.V.
 Am. J. Hum. Genet. 41, 907-924, 1987
 A;Title: Evolutionary implications of the human aldolase-A, -B, -C, and -pseudogene chromosome locations.
 A;Reference number: I39435; MUID:88046782; PMID:3674018
 A;Accession: I39435
 A;Molecule type: mRNA
 A;Residues: 139-364
 A;Cross-references: UNIPARC:UPI000016A52E; GB:M21190; NID:g178403; PIDN:AAA51697.1; PID:g178404
 C;Comment: In vertebrates, three forms of this ubiquitous glycolytic enzyme are found, aldolase A in muscle
 C;Genetics:
 A;Gene: GDB:ALDOA
 A;Cross-references: GDB:118993; OMIM:103850
 A;Map position: 16q22.2-16q22.2
 A;Introns: 38/1
 C;Superfamily: fructose-bisphosphate aldolase
 C;Keywords: aldehyde-lyase; carbon-carbon lyase; gluconeogenesis; glycolysis; muscle; pentose phosphate pat
 F;2-364/Product: fructose-bisphosphate aldolase A #status experimental
 F;147,230,364/Active site: Lys, Lys, Tyr #status experimental

Query Match 99.0%; Score 99; DB 1; Length 364;
 Best Local Similarity 95.0%; Pred. No. 2.4e-08;
 Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
 |||||
 Db 345 PSGQAGAAASESLFVSNHAY 364

RESULT 3
 ADMSA

fructose-bisphosphate aldolase (EC 4.1.2.13) A - mouse
 N;Alternate names: aldolase A; fructose-1,6-bisphosphate triosephosphate-lyase A
 C;Species: Mus musculus (house mouse)
 C;Date: 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change 09-Jul-2004
 C;Accession: S06323; B25388; A37062
 R;Mestek, A.; Stauffer, J.; Tolan, D.R.; Ciejek-Baez, E.
 Nucleic Acids Res. 15, 10595, 1987
 A;Title: Sequence of a mouse brain aldolase A cDNA.
 A;Reference number: S06323; MUID:88096598; PMID:3697100
 A;Accession: S06323
 A;Molecule type: mRNA
 A;Residues: 1-364
 A;Cross-references: UNIPROT:P05064; UNIPARC:UPI000000B2CC; GB:Y00516; NID:g49914; PIDN:CAA68571.1; PID:g499
 A;Experimental source: brain
 R;Paolella, G.; Buono, P.; Mancini, F.P.; Izzo, P.; Salvatore, F.
 Eur. J. Biochem. 156, 229-235, 1986
 A;Title: Structure and expression of mouse aldolase genes. Brain-specific aldolase C amino acid sequence is
 A;Reference number: A91165; MUID:86192445; PMID:3009179
 A;Accession: B25388
 A;Molecule type: mRNA
 A;Residues: 99-280,'C',282-355
 A;Cross-references: UNIPARC:UPI000016CBFC; GB:X03797; NID:g49916; PIDN:CAA27423.1; PID:g929677
 A;Experimental source: brain
 R;Stauffer, J.K.; Colbert, M.C.; Ciejek-Baez, E.
 J. Biol. Chem. 265, 11773-11782, 1990
 A;Title: Nonconservative utilization of aldolase A alternative promoters.
 A;Reference number: A37062; MUID:90307699; PMID:2365699
 A;Accession: A37062
 A;Molecule type: DNA
 A;Residues: 1-266;295-364
 A;Cross-references: UNIPARC:UPI0000172F34; UNIPARC:UPI0000172F35; GB:J05517
 A;Experimental source: strain RIII S/J
 C;Superfamily: fructose-bisphosphate aldolase
 C;Keywords: aldehyde-lyase; carbon-carbon lyase; gluconeogenesis; glycolysis; muscle; pentose phosphate pat
 F;2-364/Product: fructose-bisphosphate aldolase A #status predicted
 F;147,230,364/Active site: Lys, Lys, Tyr #status predicted

Query Match 97.0%; Score 97; DB 1; Length 364;
 Best Local Similarity 95.0%; Pred. No. 5.2e-08;
 Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
 ||||:|||||||
 Db 345 PSGQSGAAASESLFISNHAY 364

RESULT 4

ADRTA

fructose-bisphosphate aldolase (EC 4.1.2.13) A - rat
 N;Alternate names: aldolase A; fructose-1,6-bisphosphate triosephosphate-lyase A
 C;Species: Rattus norvegicus (Norway rat)
 C;Date: 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change 31-Dec-2004
 C;Accession: A24532; A25383; I53307; I56408
 R;Joh, K.; Mukai, T.; Yatsuki, H.; Hori, K.
 Gene 39, 17-24, 1985
 A;Title: Rat aldolase A messenger RNA: the nucleotide sequence and multiple mRNA species with different 5'-
 A;Reference number: A24532; MUID:86083188; PMID:2416636
 A;Accession: A24532
 A;Molecule type: mRNA
 A;Residues: 1-364
 A;Cross-references: UNIPROT:P05065; UNIPROT:Q63038; UNIPARC:UPI0000170873; GB:M14420; NID:g202836; PIDN:AAA
 R;Mukai, T.; Joh, K.; Arai, Y.; Yatsuki, H.; Hori, K.
 J. Biol. Chem. 261, 3347-3354, 1986
 A;Title: Tissue-specific expression of rat aldolase A mRNAs: three molecular species differing only in the
 A;Reference number: A25383; MUID:86140113; PMID:3753977
 A;Accession: A25383
 A;Molecule type: mRNA
 A;Residues: 1-144,'F',146-164,'M',166-364
 A;Cross-references: UNIPARC:UPI0000167983; GB:M12919; NID:g202834; PIDN:AAA40714.1; PID:g202835
 R;Tsutsumi, R.; Tsutsumi, K.
 Eur. J. Biochem. 142, 161-164, 1984
 A;Title: Two different aldolase A mRNA species in rat tissues.
 A;Reference number: I53307; MUID:84261525; PMID:6086339
 A;Accession: I53307
 A;Status: preliminary; translated from GB/EMBL/DDBJ
 A;Molecule type: mRNA

A;Residues: 324-329,'Q',331-356
A;Cross-references: UNIPARC:UPI00000E7075; GB:M28282; NID:g202849; PIDN:AAA40720.1; PID:g202850
R;Joh, K.; Arai, Y.; Mukai, T.; Hori, K.
J. Mol. Biol. 190, 401-410, 1986
A;Title: Expression of three mRNA species from a single rat aldolase A gene, differing in their 5' non-codi
A;Reference number: I56408; MUID:87060996; PMID:3783705
A;Accession: I56408
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-108
A;Cross-references: UNIPARC:UPI0000172F36; EMBL:X04261; NID:g55639; PIDN:CAA27815.1; PID:g1619605
C;Genetics:
A;Introns: 38/1
C;Keywords: aldehyde-lyase; carbon-carbon lyase; gluconeogenesis; glycolysis; muscle; pentose phosphate pat
F;2-364/Product: fructose-bisphosphate aldolase A #status predicted
F;147,230,364/Active site: Lys, Lys, Tyr #status predicted

Query Match 97.0%; Score 97; DB 1; Length 364;
Best Local Similarity 95.0%; Pred. No. 5.2e-08;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
||||:|||||||
Db 345 PSGQSGAAASESLFISNHAY 364

RESULT 5

I51291
aldolase C - chicken (fragment)
C;Species: Gallus gallus (chicken)
C;Date: 04-Sep-1997 #sequence_revision 04-Sep-1997 #text_change 09-Jul-2004
C;Accession: I51291
R;Meighan-Mantha, R.L.; Tolan, D.R.
J. Cell. Biochem. 57, 423-431, 1995
A;Title: Noncoordinate changes in the steady-state mRNA expressed from aldolase A and aldolase C genes duri
A;Reference number: I51291; MUID:95286677; PMID:7768978
A;Accession: I51291
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-42
A;Cross-references: UNIPROT:Q92007; UNIPARC:UPI00000FDF44; GB:S78288; NID:g999389; PIDN:AAB34479.1; PID:g99
C;Superfamily: fructose-bisphosphate aldolase

Query Match 95.0%; Score 95; DB 2; Length 42;
Best Local Similarity 95.0%; Pred. No. 1e-08;
Matches 19; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
||| |||||
Db 23 PSGHAGAAASESLFISNHAY 42

RESULT 6

JC4189
fructose-bisphosphate aldolase (EC 4.1.2.13), non-muscle-type - Pacific lamprey
N;Alternate names: non-muscle-type aldolase
C;Species: Lampetra tridentata, Entosphenus tridentatus (Pacific lamprey)
C;Date: 27-Sep-1995 #sequence_revision 27-Oct-1995 #text_change 20-Jun-2000
C;Accession: JC4189
R;Zhang, R.; Yatsuki, H.; Kusakabe, T.; Iwabe, N.; Miyata, T.; Imai, T.; Yoshida, M.; Hori, K.
J. Biochem. 117, 545-553, 1995
A;Title: Structures of cDNAs encoding the muscle-type and non-muscle-type isozymes of lamprey fructose bisp
A;Reference number: JC4188; MUID:95355304; PMID:7629020
A;Accession: JC4189
A;Molecule type: mRNA
A;Residues: 1-364
A;Cross-references: UNIPARC:UPI00001257F9; DDBJ:D38619; NID:g1619826; PIDN:BAA07607.1; PID:g974730
C;Comment: This is a glycolytic enzyme that catalyzes the reversible cleavage of fructose-1,6-bisphosphate
C;Superfamily: fructose-bisphosphate aldolase
C;Keywords: aldehyde-lyase; carbon-carbon lyase; muscle
F;230/Active site: Lys #status predicted

Query Match 77.0%; Score 77; DB 2; Length 364;
Best Local Similarity 70.0%; Pred. No. 9.4e-05;
Matches 14; Conservative 4; Mismatches 2; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
 |:| :|:|||||||:| |
 Db 345 PAGSSGSAASESLFIANHNY 364

RESULT 7

JC4188
 fructose-bisphosphate aldolase (EC 4.1.2.13), muscle-type - Pacific lamprey
 N;Alternate names: muscle-type aldolase
 C;Species: Lampetra tridentata, Entosphenus tridentatus (Pacific lamprey)
 C;Date: 27-Sep-1995 #sequence_revision 27-Oct-1995 #text_change 20-Jun-2000
 C;Accession: JC4188
 R;Zhang, R.; Yatsuki, H.; Kusakabe, T.; Iwabe, N.; Miyata, T.; Imai, T.; Yoshida, M.; Hori, K.
 J. Biochem. 117, 545-553, 1995
 A;Title: Structures of cDNAs encoding the muscle-type and non-muscle-type isozymes of lamprey fructose bisp
 A;Reference number: JC4188; MUID:95355304; PMID:7629020
 A;Accession: JC4188
 A;Molecule type: mRNA
 A;Residues: 1-363
 A;Cross-references: UNIPARC:UPI00001257EF; DDBJ:D38620; NID:g1619827; PIDN:BAA07608.1; PID:g974732
 C;Comment: This is a glycolytic enzyme that catalyzes the reversible cleavage of fructose-1,6-bisphosphate
 C;Superfamily: fructose-bisphosphate aldolase
 C;Keywords: aldehyde-lyase; carbon-carbon lyase; muscle
 F;230/Active site: Lys #status predicted

Query Match 69.5%; Score 69.5; DB 2; Length 363;
 Best Local Similarity 70.0%; Pred. No. 0.0016;
 Matches 14; Conservative 3; Mismatches 2; Indels 1; Gaps 1;

Qy 1 PSGQAGAAASESLFISNHAY 20
 |:| |||| ||||:||||
 Db 345 PTG-TGAAAGESLFFVANHAY 363

RESULT 8

ADHUC
 fructose-bisphosphate aldolase (EC 4.1.2.13) C - human
 N;Alternate names: aldolase C; fructose-1,6-bisphosphate triosephosphate-lyase C
 C;Species: Homo sapiens (man)
 C;Date: 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change 09-Jul-2004
 C;Accession: A25861; S00863; S13192
 R;Rottmann, W.H.; Deselms, K.R.; Niclas, J.; Camerato, T.; Holman, P.S.; Green, C.J.; Tolan, D.R.
 Biochimie 69, 137-145, 1987
 A;Title: The complete amino acid sequence of the human aldolase C isozyme derived from genomic clones.
 A;Reference number: A25861; MUID:87185595; PMID:3105602
 A;Accession: A25861
 A;Molecule type: DNA
 A;Residues: 1-364
 A;Cross-references: UNIPROT:P09972; UNIPARC:UPI0000000C53; GB:X05196; NID:g28598; PIDN:CAA28825.1; PID:g285
 R;Buono, P.; Paoletta, G.; Mancini, F.P.; Izzo, P.; Salvatore, F.
 Nucleic Acids Res. 16, 4733, 1988
 A;Title: The complete nucleotide sequence of the gene coding for the human aldolase C.
 A;Reference number: S00863; MUID:88247784; PMID:3267224
 A;Accession: S00863
 A;Status: translation not shown
 A;Molecule type: DNA
 A;Residues: 1-310,'V',312-364
 A;Cross-references: UNIPARC:UPI000016A523; GB:X07292; NID:g28600; PIDN:CAA30270.1; PID:g312137
 R;Buono, P.; Mancini, F.P.; Izzo, P.; Salvatore, F.
 Eur. J. Biochem. 192, 805-811, 1990
 A;Title: Characterization of the transcription-initiation site and of the promoter region within the 5' fla
 A;Reference number: S13192; MUID:91006178; PMID:2209624
 A;Accession: S13192
 A;Molecule type: DNA
 A;Residues: 1-310,'V',312-364
 A;Cross-references: UNIPARC:UPI000016A523; GB:X07292; GB:M84921; NID:g28600; PIDN:CAA30270.1; PID:g312137
 C;Genetics:
 A;Gene: GDB:ALDOC
 A;Cross-references: GDB:119670; OMIM:103870
 A;Map position: 17pter-17qter
 A;Introns: 38/1; 108/3; 127/1; 180/3; 208/3; 267/1; 333/3
 C;Superfamily: fructose-bisphosphate aldolase
 C;Keywords: aldehyde-lyase; brain; carbon-carbon lyase; gluconeogenesis; glycolysis; pentose phosphate path
 F;2-364/Product: fructose-bisphosphate aldolase C #status predicted
 F;147,230,364/Active site: Lys, Lys, Tyr #status predicted

Query Match 68.0%; Score 68; DB 1; Length 364;
Best Local Similarity 63.2%; Pred. No. 0.0028;
Matches 12; Conservative 5; Mismatches 2; Indels 0; Gaps 0;

Qy 2 SQQAGAAASESLFISNHAY 20
||: | ||::||:|:||||
Db 346 SGEDGGAAQSLYIANHAY 364

RESULT 9

T24514

hypothetical protein T05D4.1 - Caenorhabditis elegans

C;Species: Caenorhabditis elegans

C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 09-Jul-2004

C;Accession: T24514

R;McMurray, A.

submitted to the EMBL Data Library, October 1996

A;Reference number: Z19902

A;Accession: T24514

A;Status: preliminary; translated from GB/EMBL/DDBJ

A;Molecule type: DNA

A;Residues: 1-365

A;Cross-references: UNIPROT:P54216; UNIPARC:UPI0000164172; EMBL:Z81115; PIDN:CAB03291.1; GSPDB:GN00021; CES

A;Experimental source: clone T05D4

C;Genetics:

A;Gene: CESP:T05D4.1

A;Map position: 3

A;Introns: 32/1; 190/3

C;Superfamily: fructose-bisphosphate aldolase

Query Match 61.0%; Score 61; DB 2; Length 365;
Best Local Similarity 68.8%; Pred. No. 0.038;
Matches 11; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Qy 5 AGAAASESLFISNHAY 20
| ||||:||||:|:|
Db 350 ADAASQSLFVANHSY 365

RESULT 10

I53145

zebrin II - mouse

C;Species: Mus sp. (mouse)

C;Date: 02-Aug-1996 #sequence_revision 02-Aug-1996 #text_change 22-Jun-1999

C;Accession: I53145

R;Ahn, A.H.; Dziennis, S.; Hawkes, R.; Herrup, K.

Development 120, 2081-2090, 1994

A;Title: The cloning of zebrin II reveals its identity with aldolase C.

A;Reference number: I53145; MUID:95009537; PMID:7925012

A;Accession: I53145

A;Status: preliminary; translated from GB/EMBL/DDBJ

A;Molecule type: mRNA

A;Residues: 1-363

A;Cross-references: UNIPARC:UPI00000E5AF7; GB:S72537; NID:g619372; PIDN:AAB32064.1; PID:g619373

C;Superfamily: fructose-bisphosphate aldolase

Query Match 60.5%; Score 60.5; DB 2; Length 363;
Best Local Similarity 68.4%; Pred. No. 0.046;
Matches 13; Conservative 3; Mismatches 2; Indels 1; Gaps 1;

Qy 2 SQQAGAAASESLFISNHAY 20
|| |||| :||:|:||||
Db 346 SGDGGAAA-QSLYIANHAY 363

RESULT 11

ADRTC

fructose-bisphosphate aldolase (EC 4.1.2.13) C - rat

N;Alternate names: aldolase C; fructose-1,6-bisphosphate triosephosphate-lyase C; fructose-bisphosphate ald

C;Species: Rattus norvegicus (Norway rat)

C;Date: 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change 31-Dec-2004

C;Accession: S00326; A38817; JN0127; I53313

R;Kukita, A.; Mukai, T.; Miyata, T.; Hori, K.

Eur. J. Biochem. 171, 471-478, 1988

A;Title: The structure of brain-specific rat aldolase C mRNA and the evolution of aldolase isozyme genes.

A;Reference number: S00326; MUID:88151941; PMID:2831050

A;Accession: S00326
 A;Molecule type: mRNA
 A;Residues: 1-363
 A;Cross-references: UNIPROT:P09117; UNIPROT:Q63037; UNIPARC:UPI0000172F37; EMBL:X06984; NID:g55634; PIDN:CA
 A;Accession: A38817
 A;Molecule type: protein
 A;Residues: 2-21
 A;Cross-references: UNIPARC:UPI0000172F38
 R;Mukai, T.; Yatsuki, H.; Masuko, S.; Arai, Y.; Joh, K.; Hori, K.
 Biochem. Biophys. Res. Commun. 174, 1035-1042, 1991
 A;Title: The structure of the brain-specific rat aldolase C gene and its regional expression.
 A;Reference number: JN0127; MUID:91128359; PMID:1993044
 A;Accession: JN0127
 A;Molecule type: DNA
 A;Residues: 1-336, 'LAA', 340-363
 A;Cross-references: UNIPARC:UPI0000000082; GB:M63656; NID:g202841; PIDN:AAA40717.1; PID:g202842
 R;Skala, H.; Vibert, M.; Lamas, E.; Maire, P.; Schweighoffer, F.; Kahn, A.
 Eur. J. Biochem. 163, 513-518, 1987
 A;Title: Molecular cloning and expression of rat aldolase C messenger RNA during development and hepatocarc
 A;Reference number: I53313; MUID:87161851; PMID:3830170
 A;Accession: I53313
 A;Status: preliminary; translated from GB/EMBL/DDBJ
 A;Molecule type: mRNA
 A;Residues: 251-363
 A;Cross-references: UNIPARC:UPI00000E7060; EMBL:X05277; NID:g55632; PIDN:CAA28889.1; PID:g55633
 C;Genetics:
 A;Introns: 38/1; 108/3; 127/1; 180/3; 208/3; 267/1; 333/3
 C;Keywords: aldehyde-lyase; brain; carbon-carbon lyase; gluconeogenesis; glycolysis; pentose phosphate path
 F;2-363/Product: fructose-bisphosphate aldolase C #status experimental
 F;147,230,363/Active site: Lys, Lys, Tyr #status predicted

Query Match 59.5%; Score 59.5; DB 1; Length 363;
 Best Local Similarity 63.2%; Pred. No. 0.067;
 Matches 12; Conservative 4; Mismatches 2; Indels 1; Gaps 1;

Qy 2 SGQAGAAASESLFISNHAY 20
 || ||| :||::|||
 Db 346 SGDGGAAA-QSLYVANHAY 363

RESULT 12

I51292
 aldolase A - chicken (fragment)
 C;Species: Gallus gallus (chicken)
 C;Date: 04-Sep-1997 #sequence_revision 04-Sep-1997 #text_change 09-Jul-2004
 C;Accession: I51292
 R;Meighan-Mantha, R.L.; Tolan, D.R.
 J. Cell. Biochem. 57, 423-431, 1995
 A;Title: Noncoordinate changes in the steady-state mRNA expressed from aldolase A and aldolase C genes duri
 A;Reference number: I51291; MUID:95286677; PMID:7768978
 A;Accession: I51292
 A;Status: preliminary; translated from GB/EMBL/DDBJ
 A;Molecule type: mRNA
 A;Residues: 1-137
 A;Cross-references: UNIPROT:P53449; UNIPARC:UPI0000125808; GB:S78291; NID:g999391; PIDN:AAB34480.1; PID:g99
 C;Superfamily: fructose-bisphosphate aldolase

Query Match 58.0%; Score 58; DB 2; Length 137;
 Best Local Similarity 52.6%; Pred. No. 0.041;
 Matches 10; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

Qy 2 SGQAGAAASESLFISNHAY 20
 || || :||::|||
 Db 119 SGDDSGAAGQSLYVANHAY 137

RESULT 13

S45346
 fructose-bisphosphate aldolase (EC 4.1.2.13) C, brain-type - African clawed frog
 N;Alternate names: aldolase C
 C;Species: Xenopus laevis (African clawed frog)
 C;Date: 16-Oct-1997 #sequence_revision 24-Oct-1997 #text_change 09-Jul-2004
 C;Accession: S45346; I51247
 R;Atsuchi, Y.; Yamana, K.; Yatsuki, H.; Hori, K.; Ueda, S.; Shiokawa, K.
 Biochim. Biophys. Acta 1218, 153-157, 1994
 A;Title: Cloning of a brain-type aldolase cDNA and changes in its mRNA level during oogenesis and early emb

A;Reference number: I51247; MUID:94289472; PMID:8018714
 A;Accession: S45346
 A;Molecule type: mRNA
 A;Residues: 1-364
 A;Cross-references: UNIPROT:Q91384; UNIPARC:UPI00000FBC29; GB:S73606; NID:g688323; PIDN:AAB31152.1; PID:g68
 A;Experimental source: brain
 A;Note: translation of initiator Met is not shown
 C;Genetics:
 A;Gene: XALD3
 C;Superfamily: fructose-bisphosphate aldolase
 C;Keywords: aldehyde-lyase; carbon-carbon lyase
 F;2-364/Product: fructose-bisphosphate aldolase C #status predicted

Query Match 57.0%; Score 57; DB 2; Length 364;
 Best Local Similarity 47.4%; Pred. No. 0.17;
 Matches 9; Conservative 5; Mismatches 5; Indels 0; Gaps 0;

Qy 2 SGQAGAAASESLFISNHAY 20
 || :| :||::|||
 Db 346 SGDAGSAGQSLYVANHAY 364

RESULT 14

ADFF
 fructose-bisphosphate aldolase (EC 4.1.2.13) - fruit fly (Drosophila melanogaster)
 C;Species: Drosophila melanogaster
 C;Date: 30-Sep-1991 #sequence_revision 31-Dec-1992 #text_change 09-Jul-2004
 C;Accession: B42027; S06439; A28855; S22186
 R;Kim, J.; Yim, J.J.; Wang, S.; Dorsett, D.
 Mol. Cell. Biol. 12, 773-783, 1992
 A;Title: Alternate use of divergent forms of an ancient exon in the fructose-1,6-bisphosphate aldolase gene
 A;Reference number: A42027; MUID:92123202; PMID:1732743
 A;Accession: B42027
 A;Molecule type: DNA
 A;Residues: 1-361
 A;Cross-references: UNIPROT:P07764; UNIPARC:UPI000016BACB; EMBL:X60064; NID:g7571; PIDN:CAA42667.1; PID:g75
 A;Note: sequence extracted from NCBI backbone (NCBIN:76664, NCBIP:87828)
 R;Malek, A.A.; Hy, M.; Honegger, A.; Rose, K.; Brenner-Holzach, O.
 Arch. Biochem. Biophys. 266, 10-31, 1988
 A;Title: Fructose-1,6-bisphosphate aldolase from Drosophila melanogaster: primary structure analysis, second
 A;Reference number: S06439; MUID:89024658; PMID:3140728
 A;Accession: S06439
 A;Molecule type: protein
 A;Residues: 2-110,'K',112-200,'R',202-250,'A',252-361
 A;Cross-references: UNIPARC:UPI0000125817
 R;Brenner-Holzach, O.; Zumsteg, C.
 Arch. Biochem. Biophys. 214, 89-101, 1982
 A;Title: Fructose 1,6-bisphosphate aldolase of Drosophila melanogaster: comparative sequence analyses around
 A;Reference number: A28855; MUID:82205133; PMID:6805442
 A;Accession: A28855
 A;Molecule type: protein
 A;Residues: 170-179,'QS',182-200,'R',202-224,'Q',226-250,'A',252-272
 A;Cross-references: UNIPARC:UPI0000172F3D
 A;Note: peptides were ordered by homology with the rabbit sequence
 C;Genetics:
 A;Gene: FlyBase:Ald
 A;Cross-references: FlyBase:FBgn0000064
 C;Superfamily: fructose-bisphosphate aldolase
 C;Keywords: aldehyde-lyase; carbon-carbon lyase; gluconeogenesis; glycolysis; pentose phosphate pathway
 F;2-361/Product: fructose-bisphosphate aldolase #status experimental
 F;147,230,361/Active site: Lys, Lys, Tyr #status predicted

Query Match 55.5%; Score 55.5; DB 1; Length 361;
 Best Local Similarity 63.2%; Pred. No. 0.3;
 Matches 12; Conservative 3; Mismatches 3; Indels 1; Gaps 1;

Qy 2 SGQAGAAASESLFISNHAY 20
 :| || | | |||::|||
 Db 344 AGSAG-AGSGSLFVANHAY 361

RESULT 15

C42263
 fructose 1,6-bisphosphate aldolase - fruit fly (Drosophila melanogaster)
 C;Species: Drosophila melanogaster
 C;Date: 04-Mar-1993 #sequence_revision 18-Nov-1994 #text_change 09-Jul-2004

SCORE Search Results Details for Application 10717243 and Search Result us-10-717-243-57.rup.

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OM protein - protein search, using sw model

Run on: July 20, 2006, 09:36:29 ; Search time 20.5535 Seconds
(without alignments)
900.105 Million cell updates/sec

Title: US-10-717-243-57
Perfect score: 100
Sequence: 1 PSGQAGAAASESLFISNHAY 20

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2849598 seqs, 925015592 residues

Total number of hits satisfying chosen parameters: 2849598

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : UniProt_7.2:*
1: uniprot_sprot:*
2: uniprot_trembl:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Match	Query Length	DB ID	Description
1	100	100.0	363	1 ALDOA_RABIT	P00883 oryctolagus
2	99	99.0	260	2 Q9BWD9_HUMAN	Q9bwd9 homo sapien
3	99	99.0	363	1 ALDOA_HUMAN	P04075 homo sapien
4	99	99.0	364	2 Q6FI10_HUMAN	Q6fi10 homo sapien
5	99	99.0	364	2 Q5NVR5_PONPY	Q5nvr5 pongo pygma
6	97	97.0	363	1 ALDOA_MOUSE	P05064 mus musculu
7	97	97.0	363	1 ALDOA_RAT	P05065 rattus norv
8	97	97.0	364	2 Q5FWB7_MOUSE	Q5fwb7 m aldolase
9	97	97.0	364	2 Q6NY00_MOUSE	Q6ny00 mus musculu
10	95	95.0	42	2 Q92007_CHICK	Q92007 gallus gall
11	94	94.0	276	2 Q4R523_MACFA	Q4r523 macaca fasc
12	94	94.0	704	2 Q8WNT7_MACFA	Q8wnt7 macaca fasc
13	89	89.0	331	2 Q76BG8_AMBME	Q76bg8 ambystoma m
14	88	88.0	364	2 Q9CPQ9_MOUSE	Q9cpq9 m adult mal
15	88	88.0	364	2 Q9CRC1_MOUSE	Q9crc1 m adult mal

16	85	85.0	364	2	Q6GL64_XENTR	Q6gl64 xenopus tro
17	83	83.0	364	2	Q6AY07_RAT	Q6ay07 rattus norv
18	83	83.0	364	2	O12975_XENLA	O12975 xenopus lae
19	82	82.0	331	2	Q76BE7_AMICA	Q76be7 amia calva
20	79	79.0	279	2	Q7SYU5_XENLA	Q7syu5 xenopus lae
21	79	79.0	331	2	Q76BF4_LEPOS	Q76bf4 lepisosteus
22	79	79.0	364	2	Q3KPP7_XENLA	Q3kpp7 xenopus lae
23	79	79.0	364	2	Q5XGT3_XENLA	Q5xgt3 xenopus lae
24	77	77.0	364	1	ALF2_LAMJA	P53446 lampetra ja
25	76	76.0	331	2	Q76BI2_PROAN	Q76bi2 protopterus
26	75	75.0	364	2	Q803Q7_BRARE	Q803q7 brachydanio
27	75	75.0	364	2	Q8JH72_BRARE	Q8jh72 brachydanio
28	74	74.0	331	2	Q76BB1_9CHON	Q76bb1 callorhinch
29	73	73.0	331	2	Q76BC5_9CHON	Q76bc5 cephaloscyl
30	72	72.0	331	2	Q76BD2_POLOR	Q76bd2 polypterus
31	72	72.0	364	2	Q6P043_BRARE	Q6p043 brachydanio
32	71	71.0	331	2	Q76BD9_ACIBE	Q76bd9 acipenser b
33	71	71.0	331	2	Q9U5F9_EPTBU	Q9u5f9 eptatretus
34	70	70.0	331	2	Q76BE0_ACIBE	Q76be0 acipenser b
35	69.5	69.5	363	1	ALF1_LAMJA	P53445 lampetra ja
36	69	69.0	331	2	Q76BB8_9CHON	Q76bb8 potamotrygo
37	69	69.0	364	2	Q7ZW73_BRARE	Q7zw73 brachydanio
38	68	68.0	363	1	ALDOC_HUMAN	P09972 homo sapien
39	68	68.0	363	1	ALDOC_MACFA	Q9gkw3 macaca fasc
40	68	68.0	363	1	ALDOC_PANTR	Q5rlx4 pan troglod
41	68	68.0	364	2	Q6FH94_HUMAN	Q6fh94 homo sapien
42	68	68.0	364	2	Q4R4S9_MACFA	Q4r4s9 macaca fasc
43	68	68.0	394	2	Q6POL5_HUMAN	Q6p015 homo sapien
44	68	68.0	398	2	Q3SYL3_HUMAN	Q3syl3 homo sapien
45	65	65.0	331	2	Q76BC3_9CHON	Q76bc3 cephaloscyl

ALIGNMENTS

RESULT 1

ALDOA_RABIT

ID ALDOA_RABIT STANDARD; PRT; 363 AA.
AC P00883; Q28671;
DT 21-JUL-1986, integrated into UniProtKB/Swiss-Prot.
DT 21-JUL-1986, sequence version 1.
DT 07-FEB-2006, entry version 61.
DE Fructose-bisphosphate aldolase A (EC 4.1.2.13) (Muscle-type aldolase).
GN Name=ALDOA;
OS Oryctolagus cuniculus (Rabbit).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Lagomorpha; Leporidae;
OC Oryctolagus.
OX NCBI_TaxID=9986;
RN [1]
RP PROTEIN SEQUENCE.
RX MEDLINE=74094688; PubMed=4812352;
RA Lai C.-Y., Nakai N., Chang D.;
RT "Amino acid sequence of rabbit muscle aldolase and the structure of
RT the active center.";
RL Science 183:1204-1206(1974).
RN [2]
RP NUCLEOTIDE SEQUENCE [MRNA].
RX MEDLINE=84111505; PubMed=6546378;
RA Tolan D.R., Amsden A.B., Putney S.D., Urdea M.S., Penhoet E.E.;
RT "The complete nucleotide sequence for rabbit muscle aldolase A
RT messenger RNA.";
RL J. Biol. Chem. 259:1127-1131(1984).
RN [3]
RP PROTEIN SEQUENCE OF 1-164.
RX MEDLINE=75145171; PubMed=1122141;
RA Nakai N., Chang D., Lai C.-Y.;
RT "Studies on the structure of rabbit muscle aldolase. Ordering of the
RT tryptic peptides; sequence of 164 amino acid residues in the NH2-
RT terminal BrCN peptide.";
RL Arch. Biochem. Biophys. 166:347-357(1975).
RN [4]
RP PROTEIN SEQUENCE OF 173-200, AND SEQUENCE REVISION.
RX MEDLINE=80109133; PubMed=534504;
RA Benfield P.A., Forcina B.G., Gibbons I., Perham R.N.;
RT "Extended amino acid sequences around the active-site lysine residue

RT of class-I fructose 1,6-bisphosphate aldolases from rabbit muscle,
 RT sturgeon muscle, trout muscle and ox liver.";
 RL Biochem. J. 183:429-444(1979).
 RN [5]
 RP PROTEIN SEQUENCE OF 251-363, AND SEQUENCE REVISION.
 RX MEDLINE=75145172; PubMed=1122142;
 RA Lai C.-Y.;
 RT "Studies on the structure of rabbit muscle aldolase. Determination of
 RT the primary structure of the COOH-terminal BrCN peptide; the complete
 RT sequence of the subunit polypeptide chain.";
 RL Arch. Biochem. Biophys. 166:358-368(1975).
 RN [6]
 RP NUCLEOTIDE SEQUENCE [MRNA] OF 37-55 AND 349-363.
 RX MEDLINE=83167564; PubMed=6687628;
 RA Putney S.D., Herlihy W.C., Schimmel P.R.;
 RT "A new troponin T and cDNA clones for 13 different muscle proteins,
 RT found by shotgun sequencing.";
 RL Nature 302:718-721(1983).
 RN [7]
 RP ACTIVE SITE.
 RX MEDLINE=74163196; PubMed=4857186;
 RA Hartman F.C., Welch M.H.;
 RT "Identification of the histidyl residue of rabbit muscle aldolase
 RT alkylated by N-bromoacetyethanolamine phosphate.";
 RL Biochem. Biophys. Res. Commun. 57:85-92(1974).
 RN [8]
 RP ACTIVE SITE.
 RX MEDLINE=76190154; PubMed=5453;
 RA Hartman F.C., Brown J.P.;
 RT "Affinity labeling of a previously undetected essential lysyl residue
 RT in class I fructose bisphosphate aldolase.";
 RL J. Biol. Chem. 251:3057-3062(1976).
 RN [9]
 RP SUBSTRATE-BINDING SITE.
 RX MEDLINE=80046697; PubMed=499203;
 RA Patthy L., Varadi A., Thesz J., Kovacs K.;
 RT "Identification of the C-1-phosphate-binding arginine residue of
 RT rabbit-muscle aldolase. Isolation of 1,2-cyclohexanedione-labeled
 RT peptide by chemisorption chromatography.";
 RL Eur. J. Biochem. 99:309-313(1979).
 RN [10]
 RP X-RAY CRYSTALLOGRAPHY (1.9 ANGSTROMS).
 RX MEDLINE=97143309; PubMed=8989320;
 RA Blom N., Sygusch J.;
 RT "Product binding and role of the C-terminal region in class I D-
 RT fructose 1,6-bisphosphate aldolase.";
 RL Nat. Struct. Biol. 4:36-39(1997).
 RN [11]
 RP X-RAY CRYSTALLOGRAPHY (2.3 ANGSTROMS) OF 2-344 IN COMPLEX WITH
 RP SUBSTRATE, AND MUTAGENESIS OF GLU-34; ARG-42; LYS-146 AND ARG-303.
 RX MEDLINE=99435739; PubMed=10504235; DOI=10.1021/bi9828371;
 RA Choi K.H., Mazurkie A.S., Morris A.J., Utheza D., Tolan D.R.,
 RA Allen K.N.;
 RT "Structure of a fructose-1,6-bis(phosphate) aldolase liganded to its
 RT natural substrate in a cleavage-defective mutant at 2.3 A.";
 RL Biochemistry 38:12655-12664(1999).
 RN [12]
 RP X-RAY CRYSTALLOGRAPHY (2.46 ANGSTROMS), AND MUTAGENESIS OF GLU-187;
 RP GLU-189 AND LYS-229.
 RX MEDLINE=21883945; PubMed=11779856; DOI=10.1074/jbc.M107600200;
 RA Maurady A., Zdanov A., de Moissac D., Beaudry D., Sygusch J.;
 RT "A conserved glutamate residue exhibits multifunctional catalytic
 RT roles in D-fructose-1,6-bisphosphate aldolases.";
 RL J. Biol. Chem. 277:9474-9483(2002).
 CC -!- CATALYTIC ACTIVITY: D-fructose 1,6-bisphosphate = glycerone
 CC phosphate + D-glyceraldehyde 3-phosphate.
 CC -!- PATHWAY: Carbohydrate degradation; glycolysis; D-glyceraldehyde 3-
 CC phosphate and glycerone phosphate from D-glucose: step 4.
 CC -!- SUBUNIT: Tetramer of nearly identical chains, alpha and beta,
 CC which differ at only 1 position.
 CC -!- PTM: Asn-360 in the alpha chain is deaminated in the beta chain.
 CC -!- MISCELLANEOUS: In vertebrates, three forms of this ubiquitous
 CC glycolytic enzyme are found, aldolase A in muscle, aldolase B in
 CC liver and aldolase C in brain.
 CC -!- MISCELLANEOUS: Alkylation of Arg-42 inactivates the enzyme.
 CC -!- SIMILARITY: Belongs to the class I fructose-bisphosphate aldolase


```

CC      family.
CC      -!- DATABASE: NAME=Worthington enzyme manual;
CC      WWW="http://www.worthington-biochem.com/ALD/".
CC      -----
CC      Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC      Distributed under the Creative Commons Attribution-NoDerivs License
CC      -----
DR      EMBL; K02300; AAA31156.1; -; mRNA.
DR      EMBL; V00876; CAA24245.1; -; mRNA.
DR      EMBL; V00877; CAA24246.1; -; mRNA.
DR      PIR; A92444; ADRBA.
DR      PDB; 1ADO; X-ray; A/B/C/D=1-363.
DR      PDB; 1EWD; X-ray; A/B/C/D=1-363.
DR      PDB; 1EWE; X-ray; A/B/C/D=1-363.
DR      PDB; 1EWG; X-ray; A/B/C/D=1-363.
DR      PDB; 1EX5; X-ray; A/B/C/D=1-363.
DR      PDB; 1J4E; X-ray; A/B/C/D=1-363.
DR      PDB; 1ZAH; X-ray; A/B/C/D=1-363.
DR      PDB; 1ZAI; X-ray; A/B/C/D=1-363.
DR      PDB; 1ZAJ; X-ray; A/B/C/D=1-363.
DR      PDB; 1ZAL; X-ray; A/B/C/D=1-363.
DR      PDB; 6ALD; X-ray; A/B/C/D=1-363.
DR      LinkHub; P00883; -.
DR      InterPro; IPR000741; Aldolase_I.
DR      PANTHER; PTHR11627; Aldolase_I; 1.
DR      Pfam; PF00274; Glycolytic; 1.
DR      ProDom; PD001128; Aldolase_I; 1.
DR      PROSITE; PS00158; ALDOLASE_CLASS_I; 1.
KW      3D-structure; Direct protein sequencing; Glycolysis; Lyase;
KW      Phosphorylation; Schiff base.
FT      INIT MET      0      0
FT      CHAIN          1      363      Fructose-bisphosphate aldolase A.
FT                                     /FTid=PRO_0000216938.
FT      ACT_SITE      187      187      Proton acceptor.
FT      ACT_SITE      229      229      Schiff-base intermediate with
FT                                     dihydroxyacetone-P.
FT      BINDING        42      42      Substrate; C6 phosphate group.
FT      BINDING        303      303      Substrate; C6 phosphate group.
FT      SITE           72      72      Essential for substrate cleavage.
FT      SITE          107      107      Essential for substrate cleavage.
FT      SITE          146      146      Alkylation inactivates the enzyme.
FT      SITE          361      361      Alkylation inactivates the enzyme;
FT                                     essential for the subsequent hydrolysis
FT                                     of the dihydroxyacetone Schiff base.
FT      SITE          363      363      Necessary for preference for fructose
FT                                     1,6-bisphosphate over fructose 1-
FT                                     phosphate.
FT      MOD_RES        203      203      Phosphotyrosine (By similarity).
FT      MOD_RES        360      360      Deamidated asparagine (in beta chain).
FT      MUTAGEN        34      34      E->A: Reduces activity 14-fold.
FT      MUTAGEN        42      42      R->A: Reduces activity 14-fold.
FT      MUTAGEN       146      146      K->A: Loss of activity.
FT      MUTAGEN       187      187      E->A: Reduces activity over 100-fold.
FT      MUTAGEN       187      187      E->Q: Reduces activity over 1000-fold.
FT      MUTAGEN       189      189      E->Q: Reduces activity 20-fold.
FT      MUTAGEN       229      229      K->M: Loss of activity.
FT      MUTAGEN       303      303      R->A: Reduces activity 400-fold.
FT      CONFLICT       34      34      E -> Q (in Ref. 3).
FT      CONFLICT      273      275      GQS -> SQE (in Ref. 5).
FT      CONFLICT      275      275      S -> E (in Ref. 5).
FT      CONFLICT      293      295      KPW -> WPK (in Ref. 5).
FT      CONFLICT      353      353      S -> R (in Ref. 6).
FT      STRAND         6      7
FT      HELIX          9      22
FT      TURN          23      23
FT      TURN          25      26
FT      STRAND        28      32
FT      HELIX        36      45
FT      TURN         46      47
FT      HELIX        52      63
FT      TURN         64      64
FT      HELIX        67      72
FT      STRAND       73      78
FT      HELIX       80      83
FT      TURN        84      84
FT      STRAND       86      86

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FT	TURN	88	89
FT	STRAND	90	90
FT	STRAND	92	92
FT	HELIX	93	99
FT	TURN	100	101
FT	STRAND	103	107
FT	STRAND	112	114
FT	TURN	116	117
FT	STRAND	118	120

Query Match 100.0%; Score 100; DB 1; Length 363;
 Best Local Similarity 100.0%; Pred. No. 9.5e-08;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
 |||||
 Db 344 PSGQAGAAASESLFISNHAY 363

RESULT 2

Q9BWD9 HUMAN

ID Q9BWD9 HUMAN PRELIMINARY; PRT; 260 AA.
 AC Q9BWD9; Q96B15;
 DT 01-JUN-2001, integrated into UniProtKB/TrEMBL.
 DT 01-MAR-2004, sequence version 2.
 DT 07-FEB-2006, entry version 23.
 DE ALDOA protein (Similar to aldolase A, fructose-bisphosphate)
 DE (Fragment).
 GN Name=ALDOA;
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
 OC Homo.
 OX NCBI_TaxID=9606;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RC TISSUE=Lung;
 RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
 RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
 RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
 RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
 RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
 RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
 RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
 RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
 RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
 RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
 RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
 RA Fahey J., Helton E., Kettelman M., Madan A., Rodrigues S., Sanchez A.,
 RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
 RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
 RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
 RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
 RT "Generation and initial analysis of more than 15,000 full-length human
 RT and mouse cDNA sequences.";
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
 RN [2]
 RP NUCLEOTIDE SEQUENCE.
 RC TISSUE=Lung;
 RA Strausberg R.;
 RL Submitted (NOV-2000) to the EMBL/GenBank/DDBJ databases.
 RN [3]
 RP NUCLEOTIDE SEQUENCE.
 RC TISSUE=Lung;
 RA Strausberg R.;
 RL Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
 CC -!- INTERACTION:
 CC Q86WS7:XRN1; NbExp=1; IntAct=EBI-373607, EBI-372406;
 CC -----
 CC Copyrighted by the UniProt Consortium, see <http://www.uniprot.org/terms>
 CC Distributed under the Creative Commons Attribution-NoDerivs License
 CC -----
 DR EMBL; BC000367; AAH00367.2; -; mRNA.
 DR EMBL; BC016170; AAH16170.1; -; mRNA.

DR HSSP; P04075; 1ALD.
 DR SMR; Q9BWD9; 1-260.
 DR IntAct; Q9BWD9; -.
 DR Ensembl; ENSG00000149925; Homo sapiens.
 DR GO; GO:0005515; F:protein binding; IPI.
 DR InterPro; IPR000741; Aldolase_I.
 DR PANTHER; PTHR11627; Aldolase_I; 1.
 DR Pfam; PF00274; Glycolytic; 1.
 DR ProDom; PD001128; Aldolase_I; 1.
 DR PROSITE; PS00158; ALDOLASE_CLASS_I; UNKNOWN_1.
 KW Glycolysis; Lyase.
 FT NON_TER 1 1
 SQ SEQUENCE 260 AA; 27898 MW; 861B9CDE0F1F2784 CRC64;

Query Match 99.0%; Score 99; DB 2; Length 260;
 Best Local Similarity 95.0%; Pred. No. 9.7e-08;
 Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
 |||||
 Db 241 PSGQAGAAASESLFVSNHAY 260

RESULT 3

ALDOA_HUMAN
 ID ALDOA_HUMAN STANDARD; PRT; 363 AA.
 AC P04075; Q6FH76;
 DT 01-NOV-1986, integrated into UniProtKB/Swiss-Prot.
 DT 01-APR-1988, sequence version 1.
 DT 07-FEB-2006, entry version 74.
 DE Fructose-bisphosphate aldolase A (EC 4.1.2.13) (Muscle-type aldolase)
 DE (Lung cancer antigen NY-LU-1).
 GN Name=ALDOA; Synonyms=ALDA;
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
 OC Homo.
 OX NCBI_TaxID=9606;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RC TISSUE=Liver;
 RX MEDLINE=85306986; PubMed=3840020;
 RA Sakakibara M., Mukai T., Hori K.;
 RT "Nucleotide sequence of a cDNA clone for human aldolase: a messenger
 RT RNA in the liver.";
 RL Biochem. Biophys. Res. Commun. 131:413-420(1985).
 RN [2]
 RP NUCLEOTIDE SEQUENCE.
 RC TISSUE=Fibroblast;
 RX MEDLINE=87161904; PubMed=3030757;
 RA Izzo P., Costanzo P., Lupo A., Rippa E., Borghese A.M., Paoletta G.,
 RA Salvatore F.;
 RT "A new human species of aldolase A mRNA from fibroblasts.";
 RL Eur. J. Biochem. 164:9-13(1987).
 RN [3]
 RP PROTEIN SEQUENCE.
 RX MEDLINE=88183272; PubMed=3355497;
 RA Freemont P.S., Dunbar B., Fothergill-Gilmore L.A.;
 RT "The complete amino acid sequence of human skeletal-muscle fructose-
 RT bisphosphate aldolase.";
 RL Biochem. J. 249:779-788(1988).
 RN [4]
 RP NUCLEOTIDE SEQUENCE.
 RX MEDLINE=88271327; PubMed=3391172;
 RA Izzo P., Costanzo P., Lupo A., Rippa E., Paoletta G., Salvatore F.;
 RT "Human aldolase A gene. Structural organization and tissue-specific
 RT expression by multiple promoters and alternate mRNA processing.";
 RL Eur. J. Biochem. 174:569-578(1988).
 RN [5]
 RP NUCLEOTIDE SEQUENCE.
 RX MEDLINE=91153319; PubMed=1999195;
 RA Mukai T., Arai Y., Yatsuki H., Joh K., Hori K.;
 RT "An additional promoter functions in the human aldolase A gene, but
 RT not in rat.";
 RL Eur. J. Biochem. 195:781-787(1991).
 RN [6]

RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RA Ebert L., Schick M., Neubert P., Schatten R., Henze S., Korn B.;
RT "Cloning of human full open reading frames in Gateway(TM) system entry
RT vector (pDONR201).";
RL Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.
RN [7]
RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RC TISSUE=Cervix, Eye, Lung, Testis, and Uterus;
RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahey J., Helton E., Kettelman M., Madan A., Rodrigues S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences.";
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN [8]
RP PROTEIN SEQUENCE OF 1-62 AND 147-357.
RX MEDLINE=84126818; PubMed=6696436;
RA Freemont P.S., Dunbar B., Fothergill L.A.;
RT "Human skeletal-muscle aldolase: N-terminal sequence analysis of CNBr-
RT and o-iodosobenzoic acid-cleavage fragments.";
RL Arch. Biochem. Biophys. 228:342-352(1984).
RN [9]
RP NUCLEOTIDE SEQUENCE OF 1-107.
RX MEDLINE=88155643; PubMed=3441006;
RA Maire P., Gautron S., Hakim V., Gregori C., Menecier F., Kahn A.;
RT "Characterization of three optional promoters in the 5' region of the
RT human aldolase A gene.";
RL J. Mol. Biol. 197:425-438(1987).
RN [10]
RP PROTEIN SEQUENCE OF 1-21.
RC TISSUE=Platelet;
RX MEDLINE=22608298; PubMed=12665801; DOI=10.1038/nbt810;
RA Gevaert K., Goethals M., Martens L., Van Damme J., Staes A.,
RA Thomas G.R., Vandekerckhove J.;
RT "Exploring proteomes and analyzing protein processing by mass
RT spectrometric identification of sorted N-terminal peptides.";
RL Nat. Biotechnol. 21:566-569(2003).
RN [11]
RP NUCLEOTIDE SEQUENCE OF 138-363.
RX MEDLINE=88046782; PubMed=3674018;
RA Tolan D.R., Niclas J., Bruce B.D., Lebo R.V.;
RT "Evolutionary implications of the human aldolase-A, -B, -C, and -
RT pseudogene chromosome locations.";
RL Am. J. Hum. Genet. 41:907-924(1987).
RN [12]
RP PHOSPHORYLATION SITE TYR-203, AND MASS SPECTROMETRY.
RX PubMed=15592455; DOI=10.1038/nbt1046;
RA Rush J., Moritz A., Lee K.A., Guo A., Goss V.L., Spek E.J., Zhang H.,
RA Zha X.-M., Polakiewicz R.D., Comb M.J.;
RT "Immunoaffinity profiling of tyrosine phosphorylation in cancer
RT cells.";
RL Nat. Biotechnol. 23:94-101(2005).
RN [13]
RP X-RAY CRYSTALLOGRAPHY (3.0 ANGSTROMS).
RX MEDLINE=90242948; PubMed=2335208; DOI=10.1016/0014-5793(90)80211-Z;
RA Gamblin S.J., Cooper B., Millar J.R., Davies G.J., Littlechild J.A.,
RA Watson H.C.;
RT "The crystal structure of human muscle aldolase at 3.0-A resolution.";
RL FEBS Lett. 262:282-286(1990).
RN [14]
RP X-RAY CRYSTALLOGRAPHY (2.0 ANGSTROMS).

RX MEDLINE=91278081; PubMed=2056525;
 RA Gamblin S.J., Davies G.J., Grimes J.M., Jackson R.M.,
 RA Littlechild J.A., Watson H.C.;
 RT "Activity and specificity of human aldolases.";
 RL J. Mol. Biol. 219:573-576(1991).
 RN [15]
 RP X-RAY CRYSTALLOGRAPHY (2.8 ANGSTROMS).
 RX MEDLINE=99156067; PubMed=10048322;
 RA Dalby A., Dauter Z., Littlechild J.A.;
 RT "Crystal structure of human muscle aldolase complexed with fructose
 RT 1,6-bisphosphate: mechanistic implications.";
 RL Protein Sci. 8:291-297(1999).
 RN [16]
 RP VARIANT HEMOLYTIC ANEMIA GLY-128.
 RX MEDLINE=88068641; PubMed=2825199;
 RA Kishi H., Mukai T., Hirono A., Fujii H., Miwa S., Hori K.;
 RT "Human aldolase A deficiency associated with a hemolytic anemia:
 RT thermolabile aldolase due to a single base mutation.";
 RL Proc. Natl. Acad. Sci. U.S.A. 84:8623-8627(1987).
 RN [17]
 RP VARIANT HEMOLYTIC ANEMIA GLY-128.
 RX MEDLINE=91035340; PubMed=2229018;
 RA Takasaki Y., Takahashi I., Mukai T., Hori K.;
 RT "Human aldolase A of a hemolytic anemia patient with Asp-128-->Gly
 RT substitution: characteristics of an enzyme generated in E. coli
 RT transfected with the expression plasmid pHAAD128G.";
 RL J. Biochem. 108:153-157(1990).
 CC -!- CATALYTIC ACTIVITY: D-fructose 1,6-bisphosphate = glycerone
 CC phosphate + D-glyceraldehyde 3-phosphate.
 CC -!- PATHWAY: Carbohydrate degradation; glycolysis; D-glyceraldehyde 3-
 CC phosphate and glycerone phosphate from D-glucose: step 4.
 CC -!- SUBUNIT: Homotetramer.
 CC -!- DISEASE: Defects in ALDOA are a cause of hemolytic anemia
 CC [MIM:103850].
 CC -!- MISCELLANEOUS: In vertebrates, three forms of this ubiquitous
 CC glycolytic enzyme are found, aldolase A in muscle, aldolase B in
 CC liver and aldolase C in brain.
 CC -!- SIMILARITY: Belongs to the class I fructose-bisphosphate aldolase
 CC family.
 CC -----
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 CC Distributed under the Creative Commons Attribution-NoDerivs License
 CC -----
 DR EMBL; M11560; AAA51690.1; -; mRNA.
 DR EMBL; X05236; CAA28861.1; -; mRNA.
 DR EMBL; X12447; CAA30979.1; ALT_SEQ; Genomic_DNA.
 DR EMBL; CR541880; CAG46678.1; -; mRNA.
 DR EMBL; BC004333; AAH04333.1; -; mRNA.
 DR EMBL; BC010660; AAH10660.1; -; mRNA.
 DR EMBL; BC012880; AAH12880.1; -; mRNA.
 DR EMBL; BC013614; AAH13614.1; -; mRNA.
 DR EMBL; BC015888; AAH15888.1; -; mRNA.
 DR EMBL; BC016800; AAH16800.1; -; mRNA.
 DR EMBL; X06352; CAA29654.1; -; Genomic_DNA.
 DR EMBL; M21190; AAA51697.1; -; mRNA.
 DR PIR; S14084; ADHUA.
 DR PDB; 1ALD; X-ray; @=1-363.
 DR PDB; 2ALD; X-ray; A=1-363.
 DR PDB; 4ALD; X-ray; @=1-363.
 DR IntAct; P04075; -.
 DR SWISS-2DPAGE; P04075; HUMAN.
 DR Aarhus/Ghent-2DPAGE; 1302; NEPHGE.
 DR OGP; P04075; -.
 DR Siena-2DPAGE; P04075; -.
 DR Ensembl; ENSG00000149925; Homo sapiens.
 DR H-InvDB; HIX0012935; -.
 DR HGNC; HGNC:414; ALDOA.
 DR MIM; 103850; gene+phenotype.
 DR Reactome; P04075; -.
 DR LinkHub; P04075; -.
 DR GO; GO:0004332; F:fructose-bisphosphate aldolase activity; TAS.
 DR GO; GO:0006000; P:fructose metabolism; TAS.
 DR GO; GO:0006096; P:glycolysis; TAS.

Query Match 99.0%; Score 99; DB 1; Length 363;
 Best Local Similarity 95.0%; Pred. No. 1.4e-07;

Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
|||||||:|||||
Db 344 PSGQAGAAASESLFVSNHAY 363

RESULT 4

Q6FI10_HUMAN

ID Q6FI10_HUMAN PRELIMINARY; PRT; 364 AA.
AC Q6FI10;
DT 10-MAY-2005, integrated into UniProtKB/TrEMBL.
DT 10-MAY-2005, sequence version 1.
DT 07-FEB-2006, entry version 7.
DE Fructose-bisphosphate aldolase.
GN Name=ALDOA;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Halleck A., Ebert L., Mkoundinya M., Schick M., Eisenstein S.,
RA Neubert P., Kstrang K., Schatten R., Shen B., Henze S., Mar W.,
RA Korn B., Zuo D., Hu Y., LaBaer J.;
RL Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.
CC -----
CC Copyrighted by the UniProt Consortium, see <http://www.uniprot.org/terms>
CC Distributed under the Creative Commons Attribution-NoDerivs License
CC -----
DR EMBL; CR536528; CAG38765.1; -; mRNA.
DR SMR; Q6FI10; 2-364.
DR Ensembl; ENSG00000149925; Homo sapiens.
DR GO; GO:0004332; F:fructose-bisphosphate aldolase activity; IEA.
DR GO; GO:0016829; F:lyase activity; IEA.
DR GO; GO:0006096; P:glycolysis; IEA.
DR InterPro; IPR000741; Aldolase_I.
DR PANTHER; PTHR11627; Aldolase_I; 1.
DR Pfam; PF00274; Glycolytic; 1.
DR PROSITE; PS00158; ALDOLASE_CLASS_I; 1.
KW Glycolysis; Lyase.
SQ SEQUENCE 364 AA; 39420 MW; 0AAED80F755A7BE8 CRC64;

Query Match 99.0%; Score 99; DB 2; Length 364;

Best Local Similarity 95.0%; Pred. No. 1.4e-07;

Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
|||||||:|||||
Db 345 PSGQAGAAASESLFVSNHAY 364

RESULT 5

Q5NVR5_PONPY

ID Q5NVR5_PONPY PRELIMINARY; PRT; 364 AA.
AC Q5NVR5;
DT 04-JAN-2005, integrated into UniProtKB/TrEMBL.
DT 04-JAN-2005, sequence version 1.
DT 07-FEB-2006, entry version 8.
DE Fructose-bisphosphate aldolase.
GN Name=DKFZp470J0811;
OS Pongo pygmaeus (Orangutan).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Pongo.
OX NCBI_TaxID=9600;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RC TISSUE=Liver;
RG The German cDNA Consortium;
RA Poustka A., Albert R., Moosmayer P., Schupp I., Wellenreuther R.;
RA Mewes H.W., Weil B., Amid C., Osanger A., Fobo G., Han M., Wiemann S.;
RL Submitted (NOV-2004) to the EMBL/GenBank/DDBJ databases.
CC -----
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CC -----
DR EMBL; CR925940; CAI29598.1; -; mRNA.
DR SMR; Q5NVR5; 2-364.
DR GO; GO:0004332; F:fructose-bisphosphate aldolase activity; IEA.
DR GO; GO:0016829; F:lyase activity; IEA.
DR GO; GO:0006096; P:glycolysis; IEA.
DR InterPro; IPR000741; Aldolase_I.
DR PANTHER; PTHR11627; Aldolase_I; 1.
DR Pfam; PF00274; Glycolytic; 1.
DR ProDom; PD001128; Aldolase_I; 1.
DR PROSITE; PS00158; ALDOLASE_CLASS_I; 1.
KW Glycolysis; Hypothetical protein; Lyase.
SQ SEQUENCE 364 AA; 39448 MW; 4DAED62BFE37CD33 CRC64;

Query Match 99.0%; Score 99; DB 2; Length 364;
Best Local Similarity 95.0%; Pred. No. 1.4e-07;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
|||||:|||||
Db 345 PSGQAGAAASESLFVSNHAY 364

RESULT 6

ALDOA_MOUSE

ID ALDOA_MOUSE STANDARD; PRT; 363 AA.
AC P05064;
DT 13-AUG-1987, integrated into UniProtKB/Swiss-Prot.
DT 01-AUG-1988, sequence version 1.
DT 21-FEB-2006, entry version 59.
DE Fructose-bisphosphate aldolase A (EC 4.1.2.13) (Muscle-type aldolase)
DE (Aldolase 1).
GN Name=Aldoa; Synonyms=Aldol;
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muroidea; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RC STRAIN=129;
RX MEDLINE=88096598; PubMed=3697100;
RA Mestek A., Stauffer J., Tolan D.R., Ciejek-Baez E.;
RT "Sequence of a mouse brain aldolase A cDNA.";
RL Nucleic Acids Res. 15:10595-10595(1987).
RN [2]
RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RC STRAIN=C57BL/6; TISSUE=Brain;
RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahey J., Helton E., Kettman M., Madan A., Rodrigues S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences.";
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN [3]
RP NUCLEOTIDE SEQUENCE OF 1-265 AND 294-363.
RX MEDLINE=90307699; PubMed=2365699;
RA Stauffer J.K., Colbert M.C., Ciejek-Baez E.;
RT "Nonconservative utilization of aldolase A alternative promoters.";
RL J. Biol. Chem. 265:11773-11782(1990).

RN [4]
 RP NUCLEOTIDE SEQUENCE OF 98-354.
 RX MEDLINE=86192445; PubMed=3009179;
 RA Paolella G., Buono P., Mancini P., Izzo P., Salvatore F.;
 RT "Structure and expression of mouse aldolase genes. Brain-specific
 RT aldolase C amino acid sequence is closely related to aldolase A.";
 RL Eur. J. Biochem. 156:229-235(1986).
 CC -!- CATALYTIC ACTIVITY: D-fructose 1,6-bisphosphate = glycerone
 CC phosphate + D-glyceraldehyde 3-phosphate.
 CC -!- PATHWAY: Carbohydrate degradation; glycolysis; D-glyceraldehyde 3-
 CC phosphate and glycerone phosphate from D-glucose: step 4.
 CC -!- SUBUNIT: Homotetramer.
 CC -!- MISCELLANEOUS: In vertebrates, three forms of this ubiquitous
 CC glycolytic enzyme are found, aldolase A in muscle, aldolase B in
 CC liver and aldolase C in brain.
 CC -!- SIMILARITY: Belongs to the class I fructose-bisphosphate aldolase
 CC family.
 CC -----
 CC Copyrighted by the UniProt Consortium, see <http://www.uniprot.org/terms>
 CC Distributed under the Creative Commons Attribution-NoDerivs License
 CC -----
 DR EMBL; X03797; CAA27423.1; -; mRNA.
 DR EMBL; BC043026; AAH43026.1; -; mRNA.
 DR EMBL; BC050896; AAH50896.1; -; mRNA.
 DR EMBL; J05517; AAA37210.2; -; Genomic_DNA.
 DR EMBL; Y00516; CAA68571.1; -; mRNA.
 DR PIR; S06323; ADMSA.
 DR HSSP; P00883; 1ADO.
 DR SMR; P05064; 1-363.
 DR IntAct; P05064; -.
 DR SWISS-2DPAGE; P05064; MOUSE.
 DR Ensembl; ENSMUSG00000030695; Mus musculus.
 DR MGI; MGI:87994; Aldoa.
 DR GO; GO:0004332; F:fructose-bisphosphate aldolase activity; IDA.
 DR InterPro; IPR000741; Aldolase_I.
 DR PANTHER; PTHR11627; Aldolase_I; 1.
 DR Pfam; PF00274; Glycolytic; 1.
 DR ProDom; PD001128; Aldolase_I; 1.
 DR PROSITE; PS00158; ALDOLASE_CLASS_I; 1.
 KW Glycolysis; Lyase; Phosphorylation; Schiff base.
 FT INIT_MET 0 0
 FT CHAIN 1 363 Fructose-bisphosphate aldolase A.
 FT /FTId=PRO_0000216937.
 FT ACT_SITE 187 187 Proton acceptor (By similarity).
 FT ACT_SITE 229 229 Schiff-base intermediate with
 FT dihydroxyacetone-P.
 FT BINDING 55 55 Substrate; C1 phosphate group.
 FT BINDING 146 146 Substrate; C1 phosphate group.
 FT SITE 363 363 Necessary for preference for fructose
 FT 1,6-bisphosphate over fructose 1-
 FT phosphate.
 FT MOD_RES 203 203 Phosphotyrosine (By similarity).
 FT CONFLICT 280 280 S -> C (in Ref. 4).
 SQ SEQUENCE 363 AA; 39225 MW; 62D27089F284BF74 CRC64;

 Query Match 97.0%; Score 97; DB 1; Length 363;
 Best Local Similarity 95.0%; Pred. No. 3e-07;
 Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

 Qy 1 PSGQAGAAASESLFISNHAY 20
 ||||:|||||||
 Db 344 PSGQSGAAASESLFISNHAY 363

RESULT 7

ALDOA_RAT
 ID ALDOA_RAT STANDARD; PRT; 363 AA.
 AC P05065; Q63038;
 DT 13-AUG-1987, integrated into UniProtKB/Swiss-Prot.
 DT 13-AUG-1987, sequence version 1.
 DT 07-FEB-2006, entry version 54.
 DE Fructose-bisphosphate aldolase A (EC 4.1.2.13) (Muscle-type aldolase).
 GN Name=Aldoa;
 OS Rattus norvegicus (Rat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;

OC Muroidea; Muridae; Murinae; Rattus.
 OX NCBI_TaxID=10116;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RX MEDLINE=86140113; PubMed=3753977;
 RA Mukai T., Joh K., Arai Y., Yatsuki H., Hori K.;
 RT "Tissue-specific expression of rat aldolase A mRNAs. Three molecular
 RT species differing only in the 5'-terminal sequences.";
 RL J. Biol. Chem. 261:3347-3354(1986).
 RN [2]
 RP NUCLEOTIDE SEQUENCE.
 RX MEDLINE=86083188; PubMed=2416636; DOI=10.1016/0378-1119(85)90102-7;
 RA Joh K., Mukai T., Yatsuki H., Hori K.;
 RT "Rat aldolase A messenger RNA: the nucleotide sequence and multiple
 RT mRNA species with different 5'-terminal regions.";
 RL Gene 39:17-24(1985).
 RN [3]
 RP NUCLEOTIDE SEQUENCE.
 RX MEDLINE=87060996; PubMed=3783705;
 RA Joh K., Arai Y., Mukai T., Hori K.;
 RT "Expression of three mRNA species from a single rat aldolase A gene,
 RT differing in their 5' non-coding regions.";
 RL J. Mol. Biol. 190:401-410(1986).
 RN [4]
 RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
 RC TISSUE=Prostate;
 RG NIH - Mammalian Gene Collection (MGC) project;
 RL Submitted (DEC-2003) to the EMBL/GenBank/DBJ databases.
 RN [5]
 RP NUCLEOTIDE SEQUENCE OF 323-355, AND TISSUE SPECIFICITY.
 RC STRAIN=Donryu; TISSUE=Hepatoma;
 RX MEDLINE=84261525; PubMed=6086339;
 RA Tsutsumi R., Tsutsumi K., Numazaki M., Ishikawa K.;
 RT "Two different aldolase A mRNA species in rat tissues.";
 RL Eur. J. Biochem. 142:161-164(1984).
 CC -!- CATALYTIC ACTIVITY: D-fructose 1,6-bisphosphate = glycerone
 CC phosphate + D-glyceraldehyde 3-phosphate.
 CC -!- PATHWAY: Carbohydrate degradation; glycolysis; D-glyceraldehyde 3-
 CC phosphate and glycerone phosphate from D-glucose: step 4.
 CC -!- SUBUNIT: Homotetramer.
 CC -!- TISSUE SPECIFICITY: Expressed in muscle, brain and hepatoma cells.
 CC -!- MISCELLANEOUS: In vertebrates, three forms of this ubiquitous
 CC glycolytic enzyme are found, aldolase A in muscle, aldolase B in
 CC liver and aldolase C in brain.
 CC -!- SIMILARITY: Belongs to the class I fructose-bisphosphate aldolase
 CC family.
 CC -----
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 CC Distributed under the Creative Commons Attribution-NoDerivs License
 CC -----
 DR EMBL; M12919; AAA40714.1; -; mRNA.
 DR EMBL; M14420; AAA40715.1; -; mRNA.
 DR EMBL; X04261; CAA27815.1; -; Genomic DNA.
 DR EMBL; X04262; CAA27815.1; JOINED; Genomic DNA.
 DR EMBL; X04263; CAA27815.1; JOINED; Genomic DNA.
 DR EMBL; X04264; CAA27815.1; JOINED; Genomic DNA.
 DR EMBL; BC064440; AAH64440.1; -; mRNA.
 DR EMBL; M28282; AAA40720.1; -; mRNA.
 DR PIR; A24532; ADRTA.
 DR HSSP; P00883; 1ADO.
 DR SMR; P05065; 1-363.
 DR IntAct; P05065; -.
 DR Rat-heart-2DPAGE; P05065; -.
 DR Ensembl; ENSRNOG00000023647; Rattus norvegicus.
 DR RGD; 2089; Aldoa.
 DR InterPro; IPR000741; Aldolase_I.
 DR PANTHER; PTHR11627; Aldolase_I; 1.
 DR Pfam; PF00274; Glycolytic; 1.
 DR ProDom; PD001128; Aldolase_I; 1.
 DR PROSITE; PS00158; ALDOLASE_CLASS_I; 1.
 KW Glycolysis; Lyase; Phosphorylation; Schiff base.
 FT INIT MET 0 0 By similarity.
 FT CHAIN 1 363 Fructose-bisphosphate aldolase A.
 FT /FTId=PRO_0000216939.
 FT ACT_SITE 187 187 Proton acceptor (By similarity).
 FT ACT_SITE 229 229 Schiff-base intermediate with

FT				dihydroxyacetone-P.
FT	BINDING	55	55	Substrate; C1 phosphate group.
FT	BINDING	146	146	Substrate; C1 phosphate group.
FT	SITE	363	363	Necessary for preference for fructose
FT				1,6-bisphosphate over fructose 1-
FT				phosphate.
FT	MOD_RES	203	203	Phosphotyrosine (By similarity).
FT	CONFLICT	144	144	F -> S (in Ref. 2).
FT	CONFLICT	164	164	M -> V (in Ref. 2).
FT	CONFLICT	329	329	K -> Q (in Ref. 5).
SQ	SEQUENCE	363 AA;	39221 MW;	48A0468B9E3B9DB8 CRC64;

Query Match 97.0%; Score 97; DB 1; Length 363;
 Best Local Similarity 95.0%; Pred. No. 3e-07;
 Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
 ||||:|||||||
 Db 344 PSGQSGAAASESLFISNHAY 363

RESULT 8

Q5FWB7 MOUSE

ID Q5FWB7_MOUSE PRELIMINARY; PRT; 364 AA.
 AC Q5FWB7;
 DT 10-MAY-2005, integrated into UniProtKB/TrEMBL.
 DT 10-MAY-2005, sequence version 1.
 DT 07-FEB-2006, entry version 10.
 DE Aldolase 1, A isoform (Blastocyst blastocyst cDNA, RIKEN full-length
 DE enriched library, clone:I1C0025H06 product:Fructose-bisphosphate
 DE aldolase A (EC 4.1.2.13) (Muscle-type aldolase) (Aldolase 1), full
 DE insert sequence) (NOD-derived CD11c +ve dendritic cells cDNA, RIKEN
 DE full-length enriched library, clone:F630015K14 product:Fructose-
 DE bisphosphate aldolase A (EC 4.1.2.13) (Muscle-type aldolase) (Aldolase
 DE 1), full insert sequence).
 GN Name=Aldoa;
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
 OC Muroidea; Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RC TISSUE=Kidney;
 RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
 RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
 RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
 RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
 RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
 RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
 RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
 RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
 RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
 RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
 RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
 RA Fahey J., Helton E., Kettelman M., Madan A., Rodrigues S., Sanchez A.,
 RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
 RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
 RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
 RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
 RT "Generation and initial analysis of more than 15,000 full-length human
 RT and mouse cDNA sequences.";
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
 RN [2]
 RP NUCLEOTIDE SEQUENCE.
 RC TISSUE=Kidney;
 RA Director MGC Project;
 RL Submitted (FEB-2005) to the EMBL/GenBank/DBJ databases.
 RN [3]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=C57BL/6J, and NOD;
 RX MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
 RA Carninci P., Hayashizaki Y.;
 RT "High-efficiency full-length cDNA cloning.";

RL Methods Enzymol. 303:19-44(1999).
 RN [4]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=C57BL/6J, and NOD;
 RX PubMed=16141072; DOI=10.1126/science.1112014;
 RA Carninci P., Kasukawa T., Katayama S., Gough J., Frith M.C., Maeda N.,
 RA Oyama R., Ravasi T., Lenhard B., Wells C., Kodzius R., Shimokawa K.,
 RA Bajic V.B., Brenner S.E., Batalov S., Forrest A.R., Zavolan M.,
 RA Davis M.J., Wilming L.G., Aidinis V., Allen J.E.,
 RA Ambesi-Impombato A., Apweiler R., Aturaliya R.N., Bailey T.L.,
 RA Bansal M., Baxter L., Beisel K.W., Bersano T., Bono H., Chalk A.M.,
 RA Chiu K.P., Choudhary V., Christoffels A., Clutterbuck D.R.,
 RA Crowe M.L., Dalla E., Dalrymple B.P., de Bono B., Della Gatta G.,
 RA di Bernardo D., Down T., Engstrom P., Fagiolini M., Faulkner G.,
 RA Fletcher C.F., Fukushima T., Furuno M., Futaki S., Gariboldi M.,
 RA Georgii-Hemming P., Gingeras T.R., Gojobori T., Green R.E.,
 RA Gustincich S., Harbers M., Hayashi Y., Hensch T.K., Hirokawa N.,
 RA Hill D., Huminieccki L., Iacono M., Ikeo K., Iwama A., Ishikawa T.,
 RA Jakt M., Kanapin A., Katoh M., Kawasaki Y., Kelso J., Kitamura H.,
 RA Kitano H., Kollias G., Krishnan S.P., Kruger A., Kummerfeld S.K.,
 RA Kurochkin I.V., Lareau L.F., Lazarevic D., Lipovich L., Liu J.,
 RA Liuni S., McWilliam S., Madan Babu M., Madera M., Marchionni L.,
 RA Matsuda H., Matsuzawa S., Miki H., Mignone F., Miyake S., Morris K.,
 RA Mottagui-Tabar S., Mulder N., Nakano N., Nakauchi H., Ng P.,
 RA Nilsson R., Nishiguchi S., Nishikawa S., Nori F., Ohara O.,
 RA Okazaki Y., Orlando V., Pang K.C., Pavan W.J., Pavesi G., Pesole G.,
 RA Petrovsky N., Piazza S., Reed J., Reid J.F., Ring B.Z., Ringwald M.,
 RA Rost B., Ruan Y., Salzberg S.L., Sandelin A., Schneider C.,
 RA Schonbach C., Sekiguchi K., Semple C.A., Seno S., Sessa L., Sheng Y.,
 RA Shibata Y., Shimada H., Shimada K., Silva D., Sinclair B.,
 RA Sperling S., Stupka E., Suglura K., Sultana R., Takenaka Y., Taki K.,
 RA Tammoja K., Tan S.L., Tang S., Taylor M.S., Tegner J., Teichmann S.A.,
 RA Ueda H.R., van Nimwegen E., Verardo R., Wei C.L., Yagi K.,
 RA Yamanishi H., Zabarovsky E., Zhu S., Zimmer A., Hide W., Bult C.,
 RA Grimmond S.M., Teasdale R.D., Liu E.T., Brusic V., Quackenbush J.,
 RA Wahlestedt C., Mattick J.S., Hume D.A., Kai C., Sasaki D., Tomaru Y.,
 RA Fukuda S., Kanamori-Katayama M., Suzuki M., Aoki J., Arakawa T.,
 RA Iida J., Imamura K., Itoh M., Kato T., Kawaji H., Kawagashira N.,
 RA Kawashima T., Kojima M., Kondo S., Konno H., Nakano K., Ninomiya N.,
 RA Nishio T., Okada M., Plessy C., Shibata K., Shiraki T., Suzuki S.,
 RA Tagami M., Waki K., Watahiki A., Okamura-Oho Y., Suzuki H., Kawai J.,
 RA Hayashizaki Y.;
 RT "The transcriptional landscape of the mammalian genome.";
 RL Science 309:1559-1563(2005).
 RN [5]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=C57BL/6J, and NOD;
 RX PubMed=16141073; DOI=10.1126/science.1112009;
 RG RIKEN Genome Exploration Research Group, and Genome Science Group
 RG (Genome Network Core Team) and the FANTOM Consortium;
 RT "Antisense Transcription in the Mammalian Transcriptome.";
 RL Science 309:1564-1566(2005).
 RN [6]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=C57BL/6J, and NOD;
 RX MEDLINE=22354683; PubMed=12466851; DOI=10.1038/nature01266;
 RA Okazaki Y., Furuno M., Kasukawa T., Adachi J., Bono H., Kondo S.,
 RA Nikaide I., Osato N., Saito R., Suzuki H., Yamanaka I., Kiyosawa H.,
 RA Yagi K., Tomaru Y., Hasegawa Y., Nogami A., Schonbach C., Gojobori T.,
 RA Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J.,
 RA Schriml L.M., Kanapin A., Matsuda H., Batalov S., Beisel K.W.,
 RA Blake J.A., Bradt D., Brusic V., Chothia C., Corbani L.E., Cousins S.,
 RA Dalla E., Dragani T.A., Fletcher C.F., Forrest A., Frazer K.S.,
 RA Gaasterland T., Gariboldi M., Gissi C., Godzik A., Gough J.,
 RA Grimmond S., Gustincich S., Hirokawa N., Jackson I.J., Jarvis E.D.,
 RA Kanai A., Kawaji H., Kawasaki Y., Kedzierski R.M., King B.L.,
 RA Konagaya A., Kurochkin I.V., Lee Y., Lenhard B., Lyons P.A.,
 RA Maglott D.R., Maltais L., Marchionni L., McKenzie L., Miki H.,
 RA Nagashima T., Numata K., Okido T., Pavan W.J., Pertea G., Pesole G.,
 RA Petrovsky N., Pillai R., Pontius J.U., Qi D., Ramachandran S.,
 RA Ravasi T., Reed J.C., Reed D.J., Reid J., Ring B.Z., Ringwald M.,
 RA Sandelin A., Schneider C., Semple C.A., Setou M., Shimada K.,
 RA Sultana R., Takenaka Y., Taylor M.S., Teasdale R.D., Tomita M.,
 RA Verardo R., Wagner L., Wahlestedt C., Wang Y., Watanabe Y., Wells C.,
 RA Wilming L.G., Wynshaw-Boris A., Yanagisawa M., Yang I., Yang L.,
 RA Yuan Z., Zavolan M., Zhu Y., Zimmer A., Carninci P., Hayatsu N.,

RA Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N., Sato K.,
RA Shiraki T., Waki K., Kawai J., Aizawa K., Arakawa T., Fukuda S.,
RA Hara A., Hashizume W., Imotani K., Ishii Y., Itoh M., Kagawa I.,
RA Miyazaki A., Sakai K., Sasaki D., Shibata K., Shinagawa A.,
RA Yasunishi A., Yoshino M., Waterston R., Lander E.S., Rogers J.,
RA Birney E., Hayashizaki Y.;
RT "Analysis of the mouse transcriptome based on functional annotation of
RT 60,770 full-length cDNAs.";
RL Nature 420:563-573(2002).

RN [7]

RP NUCLEOTIDE SEQUENCE.

RC STRAIN=C57BL/6J, and NOD;

RX MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;

RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Suzuki H., Toyooka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
RA Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
RA Hayashizaki Y.;

RT "Functional annotation of a full-length mouse cDNA collection.";

RL Nature 409:685-690(2001).

RN [8]

RP NUCLEOTIDE SEQUENCE.

RC STRAIN=C57BL/6J, and NOD;

RX MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;

RA Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M.,
RA Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;

RT "Normalization and subtraction of cap-trapper-selected cDNAs to
RT prepare full-length cDNA libraries for rapid discovery of new genes.";
RL Genome Res. 10:1617-1630(2000).

RN [9]

RP NUCLEOTIDE SEQUENCE.

RC STRAIN=C57BL/6J, and NOD;

RX MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600;

RA Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P.,
RA Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M.,
RA Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A.,
RA Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K.,
RA Fujiwaki S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,
RA Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,
RA Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;

RT "RIKEN integrated sequence analysis (RISA) system-384-format

RT sequencing pipeline with 384 multicapillary sequencer.";

RL Genome Res. 10:1757-1771(2000).

RN [10]

RP NUCLEOTIDE SEQUENCE.

RC STRAIN=C57BL/6J, and NOD;

RA Arakawa T., Carninci P., Fukuda S., Hashizume W., Hayashida K.,
RA Hori F., Iida J., Imamura K., Imotani K., Itoh M., Kanagawa S.,
RA Kawai J., Kojima M., Konno H., Murata M., Nakamura M., Ninomiya N.,
RA Nishiyori H., Nomura K., Ohno M., Sakazume N., Sano H., Sasaki D.,
RA Shibata K., Shiraki T., Tagami M., Tagami Y., Waki K., Watahiki A.,
RA Muramatsu M., Hayashizaki Y.;

RL Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases.

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CC

DR EMBL; BC089495; AAH89495.1; -; mRNA.

Query Match 97.0%; Score 97; DB 2; Length 364;
Best Local Similarity 95.0%; Pred. No. 3e-07;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
||||:|||||||
Db 345 PSGQSGAAASESLFISNHAY 364

RESULT 9

Q6NY00_MOUSE

ID Q6NY00_MOUSE PRELIMINARY; PRT; 364 AA.
AC Q6NY00;
DT 05-JUL-2004, integrated into UniProtKB/TrEMBL.
DT 05-JUL-2004, sequence version 1.
DT 07-FEB-2006, entry version 17.
DE Aldolase 1, A isoform.
GN Name=Aldoa;
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muroidea; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RC STRAIN=C57BL/6NCr, and C3H/He; TISSUE=Hematopoietic Stem Cell, and
RC Osteoblast;
RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahey J., Helton E., Kettman M., Madan A., Rodrigues S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences.";
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN [2]
RP NUCLEOTIDE SEQUENCE.
RC STRAIN=C57BL/6NCr; TISSUE=Hematopoietic Stem Cell;
RA Director MGC Project;
RL Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases.
RN [3]
RP NUCLEOTIDE SEQUENCE.
RC STRAIN=C3H/He; TISSUE=Osteoblast;
RA Director MGC Project;
RL Submitted (FEB-2004) to the EMBL/GenBank/DDBJ databases.
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CC -----
DR EMBL; BC066801; AAH66801.1; -; mRNA.
DR EMBL; BC066218; AAH66218.1; -; mRNA.
DR HSSP; P00883; 1ADO.
DR SMR; Q6NY00; 2-364.
DR Ensembl; ENSMUSG00000030695; Mus musculus.
DR MGI; MGI:87994; Aldoa.
DR GO; GO:0004332; F:fructose-bisphosphate aldolase activity; IDA.
DR InterPro; IPR000741; Aldolase_I.
DR PANTHER; PTHR11627; Aldolase_I; 1.
DR Pfam; PF00274; Glycolytic; 1.
DR ProDom; PD001128; Aldolase_I; 1.
DR PROSITE; PS00158; ALDOLASE_CLASS_I; 1.
KW Glycolysis; Lyase.
SQ SEQUENCE 364 AA; 39312 MW; 5BD82BBE3E6D738A CRC64;

Query Match 97.0%; Score 97; DB 2; Length 364;
Best Local Similarity 95.0%; Pred. No. 3e-07;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
| | | | : | | | | | | | | | | | | | |
Db 345 PSGQSGAAASESLFISNHAY 364

RESULT 10

Q92007_CHICK

ID Q92007_CHICK PRELIMINARY; PRT; 42 AA.
AC Q92007;
DT 01-NOV-1996, integrated into UniProtKB/TrEMBL.
DT 01-NOV-1996, sequence version 1.
DT 07-FEB-2006, entry version 23.
DE Aldolase C (Aldolase A) (Fragment).
GN Name=aldolase C;
OS Gallus gallus (Chicken).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC Gallus.
OX NCBI_TaxID=9031;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=95286677; PubMed=7768978;
RA Meighan-Mantha R.L., Tolan D.R.;
RT "Noncoordinate changes in the steady-state mRNA expressed from
RT aldolase A and aldolase C genes during differentiation of chicken
RT myoblasts.";
RL J. Cell. Biochem. 57:423-431(1995).
RN [2]
RP NUCLEOTIDE SEQUENCE.
RC TISSUE=Muscle;
RA Meighan-Mantha R.L., Tolan D.R.;
RL Submitted (FEB-1994) to the EMBL/GenBank/DDBJ databases.
RN [3]
RP NUCLEOTIDE SEQUENCE.
RC TISSUE=Muscle;
RA Meighan-Mantha R.L., Tolan D.R.;
RL Submitted (NOV-1993) to the EMBL/GenBank/DDBJ databases.
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CC -----
DR EMBL; S78288; AAB34479.1; -; mRNA.
DR EMBL; L25374; AAA99864.1; -; mRNA.
DR EMBL; L25373; AAA48588.1; -; mRNA.
DR PIR; I51291; I51291.
DR HSSP; P00883; 6ALD.
DR GO; GO:0004332; F:fructose-bisphosphate aldolase activity; IEA.
DR GO; GO:0006096; P:glycolysis; IEA.
DR InterPro; IPR000741; Aldolase_I.
DR PANTHER; PTHR11627; Aldolase_I; 1.
DR Pfam; PF00274; Glycolytic; 1.
FT NON TER 42 42
SQ SEQUENCE 42 AA; 4384 MW; 7E0E34B8C695DC4B CRC64;

Query Match 95.0%; Score 95; DB 2; Length 42;
Best Local Similarity 95.0%; Pred. No. 6.2e-08;
Matches 19; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
| | | | | | | | | | | | | | | | | |
Db 23 PSGHAGAAASESLFISNHAY 42

RESULT 11

Q4R523_MACFA

ID Q4R523_MACFA PRELIMINARY; PRT; 276 AA.
AC Q4R523;
DT 19-JUL-2005, integrated into UniProtKB/TrEMBL.
DT 19-JUL-2005, sequence version 1.
DT 07-FEB-2006, entry version 7.
DE Brain cDNA, clone: Qf1A-11254, similar to human aldolase A, fructose-
DE bisphosphate (ALDOA), transcriptvariant 2,.
OS Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;

OC Cercopithecidae; Cercopithecinae; Macaca.
OX NCBI_TaxID=9541;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX PubMed=15944441; DOI=10.1093/molbev/msi187;
RA Osada N., Hirata M., Tanuma R., Kusuda J., Hida M., Suzuki Y.,
RA Sugano S., Gojobori T., Shen C.-K.J., Wu C.I., Hashimoto K.;
RT "Substitution Rate and Structural Divergence of 5'UTR Evolution:
RT Comparative Analysis Between Human and Cynomolgus Monkey cDNAs.";
RL Mol. Biol. Evol. 22:1976-1982(2005).
RN [2]
RP NUCLEOTIDE SEQUENCE.
RG International consortium for macaque cDNA sequencing and analysis;
RT "DNA sequences of macaque genes expressed in brain or testis and its
RT evolutionary implications.";
RL Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.
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CC -----
DR EMBL; AB169721; BAE01802.1; -; mRNA.
DR SMR; Q4R523; 3-276.
DR GO; GO:0004332; F:fructose-bisphosphate aldolase activity; IEA.
DR GO; GO:0016829; F:lyase activity; IEA.
DR GO; GO:0006096; P:glycolysis; IEA.
DR InterPro; IPR000741; Aldolase_I.
DR PANTHER; PTHR11627; Aldolase_I; 1.
DR Pfam; PF00274; Glycolytic; 1.
DR ProDom; PD001128; Aldolase_I; 1.
DR PROSITE; PS00158; ALDOLASE_CLASS_I; UNKNOWN_1.
KW Glycolysis; Lyase.
SQ SEQUENCE 276 AA; 29587 MW; 2CDF4D877E140C2F CRC64;

Query Match 94.0%; Score 94; DB 2; Length 276;
Best Local Similarity 90.0%; Pred. No. 7e-07;
Matches 18; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
||| ||||| ||||| |||||
Db 257 PSGHAGAAASESLFVSNHAY 276

RESULT 12
Q8WNT7_MACFA
ID Q8WNT7_MACFA PRELIMINARY; PRT; 704 AA.
AC Q8WNT7;
DT 01-MAR-2002, integrated into UniProtKB/TrEMBL.
DT 01-MAR-2002, sequence version 1.
DT 07-FEB-2006, entry version 20.
DE Fructose-1,6-bisphosphate aldolase A.
OS Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopithecidae; Cercopithecinae; Macaca.
OX NCBI_TaxID=9541;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RC TISSUE=Testis;
RA Osada N., Hida M., Kusuda J., Tanuma R., Hirata M., Suto Y., Hirai M.,
RA Terao K., Sugano S., Hashimoto K.;
RT "Cynomolgus monkey testicular cDNAs for discovery of novel human genes
RT in the human genome sequence.";
RL BMC Genomics 3:36-36(2002).
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CC -----
DR EMBL; AB066558; BAB84033.1; -; mRNA.
DR HSP; P04075; 2ALD.
DR SMR; Q8WNT7; 342-704.
DR GO; GO:0004332; F:fructose-bisphosphate aldolase activity; IEA.
DR GO; GO:0016829; F:lyase activity; IEA.
DR GO; GO:0006096; P:glycolysis; IEA.
DR InterPro; IPR000741; Aldolase_I.
DR PANTHER; PTHR11627; Aldolase_I; 1.
DR Pfam; PF00274; Glycolytic; 1.

DR ProDom; PD001128; Aldolase_I; 1.
DR PROSITE; PS00158; ALDOLASE_CLASS_I; UNKNOWN_1.
KW Glycolysis; Lyase.
SQ SEQUENCE 704 AA; 74687 MW; 02D9A004C37DFF39 CRC64;

Query Match 94.0%; Score 94; DB 2; Length 704;
Best Local Similarity 90.0%; Pred. No. 1.9e-06;
Matches 18; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
||| ||||| ||||| |||||
Db 685 PSGHAGAAASESLFVSNHAY 704

RESULT 13

Q76BG8_AMBME

ID Q76BG8_AMBME PRELIMINARY; PRT; 331 AA.
AC Q76BG8;
DT 05-JUL-2004, integrated into UniProtKB/TrEMBL.
DT 05-JUL-2004, sequence version 1.
DT 07-FEB-2006, entry version 10.
DE Fructose-bisphosphate aldolase A (Fragment).
OS Ambystoma mexicanum (Axolotl).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Amphibia; Batrachia; Caudata; Salamandroidea; Ambystomatidae;
OC Ambystoma.
OX NCBI_TaxID=8296;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RC TISSUE=Tail;
RA Kikugawa K., Katoh K., Kuraku S., Sakurai H., Ishida O., Iwabe N.,
RA Miyata T.;
RT "Basal jawed vertebrate phylogeny inferred from multiple nuclear DNA-
RT coded genes.";
RL BMC Biol. 2:3-3(2004).
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CC -----
DR EMBL; AB111374; BAD17888.1; -; mRNA.
DR HSSP; P04075; 1ALD.
DR SMR; Q76BG8; 1-331.
DR GO; GO:0004332; F:fructose-bisphosphate aldolase activity; IEA.
DR GO; GO:0016829; F:lyase activity; IEA.
DR GO; GO:0006096; P:glycolysis; IEA.
DR InterPro; IPR000741; Aldolase_I.
DR PANTHER; PTHR11627; Aldolase_I; 1.
DR Pfam; PF00274; Glycolytic; 1.
DR ProDom; PD001128; Aldolase_I; 1.
DR PROSITE; PS00158; ALDOLASE_CLASS_I; 1.
KW Glycolysis; Lyase.
FT NON_TER 1 1
SQ SEQUENCE 331 AA; 36170 MW; B7374F829DE6C591 CRC64;

Query Match 89.0%; Score 89; DB 2; Length 331;
Best Local Similarity 85.0%; Pred. No. 5.8e-06;
Matches 17; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20
|| ||||| ||||| |||||
Db 312 PSAQAGAAAGESLFVSNHAY 331

RESULT 14

Q9CPQ9_MOUSE

ID Q9CPQ9_MOUSE PRELIMINARY; PRT; 364 AA.
AC Q9CPQ9;
DT 01-JUN-2001, integrated into UniProtKB/TrEMBL.
DT 01-JUN-2001, sequence version 1.
DT 07-FEB-2006, entry version 24.
DE Adult male testis cDNA, RIKEN full-length enriched library,
DE clone:4933417I20 product:ALDOLASE 1, A ISOFORM homolog (Adult male
DE testis cDNA, RIKEN full-length enriched library, clone:4921524E03
DE product:FRUCTOSE-BISPHOSPHATE ALDOLASE A (EC 4.1.2.13) (MUSCLE-TYPE
DE ALDOLASE) homolog) (Novel protein similar to aldolase 1, A isoform
DE Aldol).

GN Name=Aldoa; Synonyms=RP24-191C1.1; ORFNames=RP24-191C1.1-001;
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
 OC Muroidea; Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=C57BL/6J; TISSUE=Testis;
 RX MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
 RA Carninci P., Hayashizaki Y.;
 RT "High-efficiency full-length cDNA cloning.";
 RL Methods Enzymol. 303:19-44(1999).
 RN [2]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=C57BL/6J; TISSUE=Testis;
 RX PubMed=16141072; DOI=10.1126/science.1112014;
 RA Carninci P., Kasukawa T., Katayama S., Gough J., Frith M.C., Maeda N.,
 RA Oyama R., Ravasi T., Lenhard B., Wells C., Kodzius R., Shimokawa K.,
 RA Bajic V.B., Brenner S.E., Batalov S., Forrest A.R., Zavolan M.,
 RA Davis M.J., Wilming L.G., Aidinis V., Allen J.E.,
 RA Ambesi-Impombato A., Apweiler R., Aturaliya R.N., Bailey T.L.,
 RA Bansal M., Baxter L., Beisel K.W., Bersano T., Bono H., Chalk A.M.,
 RA Chiu K.P., Choudhary V., Christoffels A., Clutterbuck D.R.,
 RA Crowe M.L., Dalla E., Dalrymple B.P., de Bono B., Della Gatta G.,
 RA di Bernardo D., Down T., Engstrom P., Fagiolini M., Faulkner G.,
 RA Fletcher C.F., Fukushima T., Furuno M., Futaki S., Gariboldi M.,
 RA Georgii-Hemming P., Gingeras T.R., Gojobori T., Green R.E.,
 RA Gustincich S., Harbers M., Hayashi Y., Hensch T.K., Hirokawa N.,
 RA Hill D., Huminieccki L., Iacono M., Ikeo K., Iwama A., Ishikawa T.,
 RA Jakt M., Kanapin A., Katoh M., Kawasawa Y., Kelso J., Kitamura H.,
 RA Kitano H., Kollias G., Krishnan S.P., Kruger A., Kummerfeld S.K.,
 RA Kurochkin I.V., Lareau L.F., Lazarevic D., Lipovich L., Liu J.,
 RA Liuni S., McWilliam S., Madan Babu M., Madera M., Marchionni L.,
 RA Matsuda H., Matsuzawa S., Miki H., Mignone F., Miyake S., Morris K.,
 RA Mottaqui-Tabar S., Mulder N., Nakano N., Nakauchi H., Ng P.,
 RA Nilsson R., Nishiguchi S., Nishikawa S., Nori F., Ohara O.,
 RA Okazaki Y., Orlando V., Pang K.C., Pavan W.J., Pavesi G., Pesole G.,
 RA Petrovsky N., Piazza S., Reed J., Reid J.F., Ring B.Z., Ringwald M.,
 RA Rost B., Ruan Y., Salzberg S.L., Sandelin A., Schneider C.,
 RA Schonbach C., Sekiguchi K., Semple C.A., Seno S., Sessa L., Sheng Y.,
 RA Shibata Y., Shimada H., Shimada K., Silva D., Sinclair B.,
 RA Sperling S., Stupka E., Sugiyura K., Sultana R., Takenaka Y., Taki K.,
 RA Tammoja K., Tan S.L., Tang S., Taylor M.S., Tegner J., Teichmann S.A.,
 RA Ueda H.R., van Nimwegen E., Verardo R., Wei C.L., Yagi K.,
 RA Yamanishi H., Zabarovsky E., Zhu S., Zimmer A., Hide W., Bult C.,
 RA Grimond S.M., Teasdale R.D., Liu E.T., Brusic V., Quackenbush J.,
 RA Wahlestedt C., Mattick J.S., Hume D.A., Kai C., Sasaki D., Tomaru Y.,
 RA Fukuda S., Kanamori-Katayama M., Suzuki M., Aoki J., Arakawa T.,
 RA Iida J., Imamura K., Itoh M., Kato T., Kawaji H., Kawagashira N.,
 RA Kawashima T., Kojima M., Kondo S., Konno H., Nakano K., Ninomiya N.,
 RA Nishio T., Okada M., Plessy C., Shibata K., Shiraki T., Suzuki S.,
 RA Tagami M., Waki K., Watahiki A., Okamura-Oho Y., Suzuki H., Kawai J.,
 RA Hayashizaki Y.;
 RT "The transcriptional landscape of the mammalian genome.";
 RL Science 309:1559-1563(2005).
 RN [3]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=C57BL/6J; TISSUE=Testis;
 RX PubMed=16141073; DOI=10.1126/science.1112009;
 RG RIKEN Genome Exploration Research Group, and Genome Science Group
 RG (Genome Network Core Team) and the FANTOM Consortium;
 RT "Antisense Transcription in the Mammalian Transcriptome.";
 RL Science 309:1564-1566(2005).
 RN [4]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=C57BL/6J; TISSUE=Testis;
 RX MEDLINE=22354683; PubMed=12466851; DOI=10.1038/nature01266;
 RA Okazaki Y., Furuno M., Kasukawa T., Adachi J., Bono H., Kondo S.,
 RA Nikaido I., Osato N., Saito R., Suzuki H., Yamanaka I., Kiyosawa H.,
 RA Yagi K., Tomaru Y., Hasegawa Y., Nogami A., Schonbach C., Gojobori T.,
 RA Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J.,
 RA Schriml L.M., Kanapin A., Matsuda H., Batalov S., Beisel K.W.,
 RA Blake J.A., Bradt D., Brusic V., Chothia C., Corbani L.E., Cousins S.,
 RA Dalla E., Dragani T.A., Fletcher C.F., Forrest A., Frazer K.S.,
 RA Gaasterland T., Gariboldi M., Gissi C., Godzik A., Gough J.,

RA Grimmond S., Gustincich S., Hirokawa N., Jackson I.J., Jarvis E.D.,
 RA Kanai A., Kawaji H., Kawasaki Y., Kedzierski R.M., King B.L.,
 RA Konagaya A., Kurochkin I.V., Lee Y., Lenhard B., Lyons P.A.,
 RA Maglott D.R., Maltais L., Marchionni L., McKenzie L., Miki H.,
 RA Nagashima T., Numata K., Okido T., Pavan W.J., Pertea G., Pesole G.,
 RA Petrovsky N., Pillai R., Pontius J.U., Qi D., Ramachandran S.,
 RA Ravasi T., Reed J.C., Reed D.J., Reid J., Ring B.Z., Ringwald M.,
 RA Sandelin A., Schneider C., Semple C.A., Setou M., Shimada K.,
 RA Sultana R., Takenaka Y., Taylor M.S., Teasdale R.D., Tomita M.,
 RA Verardo R., Wagner L., Wahlestedt C., Wang Y., Watanabe Y., Wells C.,
 RA Wilming L.G., Wynshaw-Boris A., Yanagisawa M., Yang I., Yang L.,
 RA Yuan Z., Zavolan M., Zhu Y., Zimmer A., Carninci P., Hayatsu N.,
 RA Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N., Sato K.,
 RA Shiraki T., Waki K., Kawai J., Aizawa K., Arakawa T., Fukuda S.,
 RA Hara A., Hashizume W., Imotani K., Ishii Y., Itoh M., Kagawa I.,
 RA Miyazaki A., Sakai K., Sasaki D., Shibata K., Shinagawa A.,
 RA Yasunishi A., Yoshino M., Waterston R., Lander E.S., Rogers J.,
 RA Birney E., Hayashizaki Y.;
 RT "Analysis of the mouse transcriptome based on functional annotation of
 RT 60,770 full-length cDNAs.";
 RL Nature 420:563-573(2002).
 RN [5]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=C57BL/6J; TISSUE=Testis;
 RX MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;
 RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
 RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
 RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
 RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
 RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
 RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,
 RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
 RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
 RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
 RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
 RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
 RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
 RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
 RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
 RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
 RA Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
 RA Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
 RA Hayashizaki Y.;
 RT "Functional annotation of a full-length mouse cDNA collection.";
 RL Nature 409:685-690(2001).
 RN [6]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=C57BL/6J; TISSUE=Testis;
 RX MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
 RA Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M.,
 RA Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
 RT "Normalization and subtraction of cap-trapper-selected cDNAs to
 RT prepare full-length cDNA libraries for rapid discovery of new genes.";
 RL Genome Res. 10:1617-1630(2000).
 RN [7]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=C57BL/6J; TISSUE=Testis;
 RX MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600;
 RA Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P.,
 RA Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M.,
 RA Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A.,
 RA Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K.,
 RA Fujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,
 RA Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,
 RA Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;
 RT "RIKEN integrated sequence analysis (RISA) system-384-format
 RT sequencing pipeline with 384 multicapillary sequencer.";
 RL Genome Res. 10:1757-1771(2000).
 RN [8]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=C57BL/6J; TISSUE=Testis;
 RA Adachi J., Aizawa K., Akahira S., Akimura T., Arai A., Aono H.,
 RA Arakawa T., Bono H., Carninci P., Fukuda S., Fukunishi Y., Furuno M.,
 RA Hanagaki T., Hara A., Hayatsu N., Hiramoto K., Hiraoka T., Hori F.,
 RA Imotani K., Ishii Y., Itoh M., Izawa M., Kasukawa T., Kato H.,
 RA Kawai J., Kojima Y., Konno H., Kouda M., Koya S., Kurihara C.,

RA Matsuyama T., Miyazaki A., Nishi K., Nomura K., Numazaki R., Ohno M.,
 RA Okazaki Y., Okido T., Owa C., Saito H., Saito R., Sakai C., Sakai K.,
 RA Sano H., Sasaki D., Shibata K., Shibata Y., Shinagawa A., Shiraki T.,
 RA Sogabe Y., Suzuki H., Tagami M., Tagawa A., Takahashi F., Tanaka T.,
 RA Tejima Y., Toya T., Yamamura T., Yasunishi A., Yoshida K., Yoshino M.,
 RA Muramatsu M., Hayashizaki Y.;
 RL Submitted (JUL-2000) to the EMBL/GenBank/DDBJ databases.
 RN [9]
 RP NUCLEOTIDE SEQUENCE.
 RA Cobley V.;
 RL Submitted (DEC-2004) to the EMBL/GenBank/DDBJ databases.
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 DR EMBL; AK016845; BAB30459.1; -; mRNA.
 DR EMBL; AK014956; BAB29638.1; -; mRNA.
 DR EMBL; AL928642; CAI26150.1; -; Genomic_DNA.
 DR HSSP; P04075; 2ALD.
 DR SMR; Q9CPQ9; 2-364.
 DR Ensembl; ENSMUSG00000059343; Mus musculus.
 DR MGI; MGI:87994; Aldoa.
 DR GO; GO:0004332; F:fructose-bisphosphate aldolase activity; IDA.
 DR InterPro; IPR000741; Aldolase_I.
 DR PANTHER; PTHR11627; Aldolase_I; 1.
 DR Pfam; PFO0274; Glycolytic; 1.
 DR ProDom; PD001128; Aldolase_I; 1.
 DR PROSITE; PS00158; ALDOLASE_CLASS_I; 1.
 KW Glycolysis; Lyase.
 SQ SEQUENCE 364 AA; 39285 MW; 53C8A3919977FF2F CRC64;

Query Match 88.0%; Score 88; DB 2; Length 364;
 Best Local Similarity 85.0%; Pred. No. 9.4e-06;
 Matches 17; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

QY 1 PSGQAGAAASESLFISNHAY 20
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 Db 345 PSGKTGATASESLFISNHAY 364

RESULT 15

Q9CRC1_MOUSE
 ID Q9CRC1_MOUSE PRELIMINARY; PRT; 364 AA.
 AC Q9CRC1;
 DT 01-JUN-2001, integrated into UniProtKB/TrEMBL.
 DT 01-JUN-2001, sequence version 1.
 DT 07-FEB-2006, entry version 22.
 DE Adult male testis cDNA, RIKEN full-length enriched library,
 DE clone:4933425L11 product:fructose-bisphosphate aldolase (EC 4.1.2.13)
 DE A homolog (Adult male testis cDNA, RIKEN full-length enriched library,
 DE clone:1700027I20 product:fructose-bisphosphate aldolase (EC 4.1.2.13)
 DE A homolog).
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
 OC Muroidea; Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=C57BL/6J; TISSUE=Testis;
 RX MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
 RA Carninci P., Hayashizaki Y.;
 RT "High-efficiency full-length cDNA cloning.";
 RL Methods Enzymol. 303:19-44(1999).
 RN [2]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=C57BL/6J; TISSUE=Testis;
 RX PubMed=16141072; DOI=10.1126/science.1112014;
 RA Carninci P., Kasukawa T., Katayama S., Gough J., Frith M.C., Maeda N.,
 RA Oyama R., Ravasi T., Lenhard B., Wells C., Kodzius R., Shimokawa K.,
 RA Bajic V.B., Brenner S.E., Batalov S., Forrest A.R., Zavolan M.,
 RA Davis M.J., Wilming L.G., Aidinis V., Allen J.E.,
 RA Ambesi-Impiombato A., Apweiler R., Aturaliya R.N., Bailey T.L.,
 RA Bansal M., Baxter L., Beisel K.W., Bersano T., Bono H., Chalk A.M.,
 RA Chiu K.P., Choudhary V., Christoffels A., Clutterbuck D.R.,
 RA Crowe M.L., Dalla E., Dalrymple B.P., de Bono B., Della Gatta G.,

RA di Bernardo D., Down T., Engstrom P., Fagiolini M., Faulkner G.,
 RA Fletcher C.F., Fukushima T., Furuno M., Futaki S., Gariboldi M.,
 RA Georgii-Hemming P., Gingeras T.R., Gojobori T., Green R.E.,
 RA Gustincich S., Harbers M., Hayashi Y., Hensch T.K., Hirokawa N.,
 RA Hill D., Huminiecki L., Iacono M., Ikeo K., Iwama A., Ishikawa T.,
 RA Jakt M., Kanapin A., Katoh M., Kawasaki Y., Kelso J., Kitamura H.,
 RA Kitano H., Kollias G., Krishnan S.P., Kruger A., Kummerfeld S.K.,
 RA Kurochkin I.V., Lareau L.F., Lazarevic D., Lipovich L., Liu J.,
 RA Liuni S., McWilliam S., Madan Babu M., Madera M., Marchionni L.,
 RA Matsuda H., Matsuzawa S., Miki H., Mignone F., Miyake S., Morris K.,
 RA Mottagui-Tabar S., Mulder N., Nakano N., Nakauchi H., Ng P.,
 RA Nilsson R., Nishiguchi S., Nishikawa S., Nori F., Ohara O.,
 RA Okazaki Y., Orlando V., Pang K.C., Pavan W.J., Pavesi G., Pesole G.,
 RA Petrovsky N., Piazza S., Reed J., Reid J.F., Ring B.Z., Ringwald M.,
 RA Rost B., Ruan Y., Salzberg S.L., Sandelin A., Schneider C.,
 RA Schonbach C., Sekiguchi K., Semple C.A., Seno S., Sessa L., Sheng Y.,
 RA Shibata Y., Shimada K., Shimada K., Silva D., Sinclair B.,
 RA Sperling S., Stupka E., Sugiura K., Sultana R., Takenaka Y., Taki K.,
 RA Tammoja K., Tan S.L., Tang S., Taylor M.S., Tegner J., Teichmann S.A.,
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 RA Yamanishi H., Zabarovsky E., Zhu S., Zimmer A., Hide W., Bult C.,
 RA Grimmond S.M., Teasdale R.D., Liu E.T., Brusica V., Quackenbush J.,
 RA Wahlestedt C., Mattick J.S., Hume D.A., Kai C., Sasaki D., Tomaru Y.,
 RA Fukuda S., Kanamori-Katayama M., Suzuki M., Aoki J., Arakawa T.,
 RA Iida J., Imamura K., Itoh M., Kato T., Kawaji H., Kawagashira N.,
 RA Kawashima T., Kojima M., Kondo S., Konno H., Nakano K., Ninomiya N.,
 RA Nishio T., Okada M., Plessy C., Shibata K., Shiraki T., Suzuki S.,
 RA Tagami M., Waki K., Watahiki A., Okamura-Oho Y., Suzuki H., Kawai J.,
 RA Hayashizaki Y.;
 RT "The transcriptional landscape of the mammalian genome.";
 RL Science 309:1559-1563(2005).
 RN [3]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=C57BL/6J; TISSUE=Testis;
 RX PubMed=16141073; DOI=10.1126/science.1112009;
 RG RIKEN Genome Exploration Research Group, and Genome Science Group
 RG (Genome Network Core Team) and the FANTOM Consortium;
 RT "Antisense Transcription in the Mammalian Transcriptome.";
 RL Science 309:1564-1566(2005).
 RN [4]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=C57BL/6J; TISSUE=Testis;
 RX MEDLINE=22354683; PubMed=12466851; DOI=10.1038/nature01266;
 RA Okazaki Y., Furuno M., Kasukawa T., Adachi J., Bono H., Kondo S.,
 RA Nikaido I., Osato N., Saito R., Suzuki H., Yamanaka I., Kiyosawa H.,
 RA Yagi K., Tomaru Y., Hasegawa Y., Nogami A., Schonbach C., Gojobori T.,
 RA Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J.,
 RA Schriml L.M., Kanapin A., Matsuda H., Batalov S., Beisel K.W.,
 RA Blake J.A., Bradt D., Brusica V., Chothia C., Corbani L.E., Cousins S.,
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 RA Konagaya A., Kurochkin I.V., Lee Y., Lenhard B., Lyons P.A.,
 RA Maglott D.R., Maltais L., Marchionni L., McKenzie L., Miki H.,
 RA Nagashima T., Numata K., Okido T., Pavan W.J., Pertea G., Pesole G.,
 RA Petrovsky N., Pillai R., Pontius J.U., Qi D., Ramachandran S.,
 RA Ravasi T., Reed J.C., Reed D.J., Reid J., Ring B.Z., Ringwald M.,
 RA Sandelin A., Schneider C., Semple C.A., Setou M., Shimada K.,
 RA Sultana R., Takenaka Y., Taylor M.S., Teasdale R.D., Tomita M.,
 RA Verardo R., Wagner L., Wahlestedt C., Wang Y., Watanabe Y., Wells C.,
 RA Wilming L.G., Wynshaw-Boris A., Yanagisawa M., Yang I., Yang L.,
 RA Yuan Z., Zavolan M., Zhu Y., Zimmer A., Carninci P., Hayatsu N.,
 RA Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N., Sato K.,
 RA Shiraki T., Waki K., Kawai J., Aizawa K., Arakawa T., Fukuda S.,
 RA Hara A., Hashizume W., Imotani K., Ishii Y., Itoh M., Kagawa I.,
 RA Miyazaki A., Sakai K., Sasaki D., Shibata K., Shinagawa A.,
 RA Yasunishi A., Yoshino M., Waterston R., Lander E.S., Rogers J.,
 RA Birney E., Hayashizaki Y.;
 RT "Analysis of the mouse transcriptome based on functional annotation of
 RT 60,770 full-length cDNAs.";
 RL Nature 420:563-573(2002).
 RN [5]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=C57BL/6J; TISSUE=Testis;
 RX MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;

RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
RA Gustinich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
RA Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
RA Hayashizaki Y.;

RT "Functional annotation of a full-length mouse cDNA collection."
RL Nature 409:685-690(2001).

RN [6]

RP NUCLEOTIDE SEQUENCE.

RC STRAIN=C57BL/6J; TISSUE=Testis;

RX MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;

RA Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M.,
RA Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;

RT "Normalization and subtraction of cap-trapper-selected cDNAs to
RT prepare full-length cDNA libraries for rapid discovery of new genes."
RL Genome Res. 10:1617-1630(2000).

RN [7]

RP NUCLEOTIDE SEQUENCE.

RC STRAIN=C57BL/6J; TISSUE=Testis;

RX MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600;

RA Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P.,
RA Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M.,
RA Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A.,
RA Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K.,
RA Fujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,
RA Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,
RA Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;

RT "RIKEN integrated sequence analysis (RISA) system-384-format
RT sequencing pipeline with 384 multicapillary sequencer."
RL Genome Res. 10:1757-1771(2000).

RN [8]

RP NUCLEOTIDE SEQUENCE.

RC STRAIN=C57BL/6J; TISSUE=Testis;

RA Adachi J., Aizawa K., Akahira S., Akimura T., Arai A., Aono H.,
RA Arakawa T., Bono H., Carninci P., Fukuda S., Fukunishi Y., Furuno M.,
RA Hanagaki T., Hara A., Hayatsu N., Hiramoto K., Hiraoka T., Hori F.,
RA Imotani K., Ishii Y., Itoh M., Izawa M., Kasukawa T., Kato H.,
RA Kawai J., Kojima Y., Konno H., Kouda M., Koya S., Kurihara C.,
RA Matsuyama T., Miyazaki A., Nishi K., Nomura K., Numazaki R., Ohno M.,
RA Okazaki Y., Okido T., Owa C., Saito H., Saito R., Sakai C., Sakai K.,
RA Sano H., Sasaki D., Shibata K., Shibata Y., Shinagawa A., Shiraki T.,
RA Sogabe Y., Suzuki H., Tagami M., Tagawa A., Takahashi F., Tanaka T.,
RA Tejima Y., Toya T., Yamamura T., Yasunishi A., Yoshida K., Yoshino M.,
RA Muramatsu M., Hayashizaki Y.;

RL Submitted (JUL-2000) to the EMBL/GenBank/DDBJ databases.

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CC

DR EMBL; AK016920; BAB30498.1; -; mRNA.

DR EMBL; AK006425; BAB24582.1; -; mRNA.

DR HSSP; P04075; 2ALD.

DR SMR; Q9CRC1; 3-364.

DR Ensembl; ENSMUSG00000063129; Mus musculus.

DR GO; GO:0004332; F:fructose-bisphosphate aldolase activity; IEA.

DR GO; GO:0016829; F:lyase activity; IEA.

DR GO; GO:0006096; P:glycolysis; IEA.

DR InterPro; IPR000741; Aldolase_I.

DR PANTHER; PTHR11627; Aldolase_I; 1.

DR Pfam; PF00274; Glycolytic; 1.

DR ProDom; PD001128; Aldolase_I; 1.

DR PROSITE; PS00158; ALDOLASE_CLASS_I; 1.

KW Glycolysis; Lyase.

SQ SEQUENCE 364 AA; 39371 MW; 0360CD12B8509A0D CRC64;

Query Match 88.0%; Score 88; DB 2; Length 364;

Best Local Similarity 85.0%; Pred. No. 9.4e-06;

Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Qy 1 PSGQAGAAASESLFISNHAY 20

|| ::||||||||||||||

Db 345 PSNESGAAASESLFISNHAY 364

Search completed: July 20, 2006, 09:53:02

Job time : 21.8035 secs

SCORE 1.3 BuildDate: 12/06/2005
